

September 2010

Appendices

The Great California Delta Trail Blueprint Report for Contra Costa and Solano Counties



PREPARED FOR:
The Delta Protection Commission



PREPARED BY:
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Appendix A. Summary of SB 1556

Bill Number: SB 1556 Chaptered

Bill Text

Chapter 839

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Amended in Senate March 27, 2006

Introduced by Senator Torlakson

(Principal coauthor: Assembly Member Wolk)

(Coauthors: Senators Chesbro, Machado, and Ortiz)

(Coauthors: Assembly Members Aghazarian and Jones)

February 23, 2006

An act to add Chapter 12 (commencing with Section 5852) to Division 5 of the Public Resources Code, and to amend Section 99234 of the Public Utilities Code, relating to parks and recreation.

Legislative Counsel's Digest

SB 1556, Torlakson Parks: The Great California Delta Trail System.

Existing law establishes the Delta Protection Commission to preserve, protect, maintain, and enhance the Sacramento-San Joaquin Delta region's environmental resources and quality, including preserving and protecting agriculture, wildlife habitats, open spaces, outdoor recreational activities, public access, and use of public lands. This bill would additionally require the Delta Protection Commission to establish a continuous recreation corridor, including bicycle and hiking trails, around the delta, as defined. The bill would also require the plan to link the San Francisco Bay Trail system to planned Sacramento River trails in Yolo and Sacramento Counties. Existing law requires local transportation planning agencies to allocate funds in the local transportation fund, as defined, for establishing and maintaining pedestrian and bicycle trails. Existing law authorizes the Metropolitan Transportation Commission to allocate those funds to

establish a recreation corridor, including a bicycle and hiking trail, around the perimeter of the San Francisco and San Pablo Bays.

This bill would authorize the transportation planning agencies that allocate those funds to the cities and counties with jurisdiction or a sphere of influence within the delta, to allocate those funds to the Delta Protection Commission for specified activities around the delta.

The People of the State of California Do Enact as Follows:

SECTION 1. (a) The Legislature hereby finds all of the following:

(1) The Great California Delta region is a wondrous state and national treasure, with its natural resources and fertile soils for agriculture, its access to recreation and science research, and its rich history and beauty.

(2) The California Delta provides two-thirds of the state's drinking and irrigation water, that flows through the delta's over 1,000 miles of waterways, levees, and shorelines.

(3) The California Delta is of great ecological significance, with its two most prominent waterways, the Sacramento and the San Joaquin Rivers, carrying fresh water from the Sierra Nevada Range and the Central Valley to the San Francisco Bay.

(4) The California Delta is a key part of the Pacific Flyway, and its rich ecosystem serves as home to thousands of unique birds, fish, animals, and plants, and is enjoyed by outdoor enthusiasts, water-sport fans, hunters, fishermen, and naturalists.

(5) The California Delta is a complicated and fragile system that needs the appreciation and protection of future generations of Californians.

(6) The California Delta is characterized by its numerous scenic waterways, levee-top roadways, historic towns, idyllic marinas, eucalyptus tree windrows, and highly productive family farms.

(7) There are 22 public recreation areas in the Sacramento-San Joaquin Delta region, with fishing, park day use facilities, campgrounds, trails and boating access that support numerous recreational activities including boating, water skiing, jet skiing, windsurfing, sailing, fishing, relaxing, hiking and jogging, horseback riding, swimming, picnicking, and cycling.

(8) California is challenged by a growing obesity crisis and state and local leaders must address the need for more opportunities for exercise, movement, and recreation in public settings.

(9) The Delta Protection Commission surveys have found that there are unmet recreational needs in the delta region, including a trail for bicycling and hiking, in the Sacramento-San Joaquin Delta region.

(10) A bicycle and pedestrian trail would provide an important link between the people of California and one of our most precious natural resources.

(11) A bicycle and pedestrian trail connecting the delta region, with adjacent areas, would provide a great link between our fascinating delta communities and foster a connection between our rich histories and present challenges.

(b) The Legislature declares its support for the creation of a Great California Delta Trail, linking the San Francisco Bay Trail system and the planned Sacramento River trails in Yolo and Sacramento Counties to

the present and future trailways around the delta, including, but not limited to, the delta's shorelines in Contra Costa, San Joaquin, Solano, Sacramento, and Yolo Counties.

SEC. 2. Chapter 12 (commencing with Section 5852) is added to Division 5 of the Public Resources Code, to read:

Chapter 12. The Great California Delta Trail System

5852. "Delta" means the Sacramento-San Joaquin Delta, as defined in Section 12220 of the Water Code minus the area contained in Alameda County.

5853. "Commission" means Delta Protection Commission as defined in Section 29721.

5854. (a) In accordance with the requirements of subdivision (c), the commission shall develop and adopt a plan and implementation program, including a finance and maintenance plan, for a continuous regional recreational corridor that will extend around the delta, including, but not limited to, the delta's shorelines in Contra Costa, Solano, San Joaquin, Sacramento, and Yolo Counties. This plan shall link the San Francisco Bay Trail system to the planned Sacramento River trails in Yolo and Sacramento Counties. This plan shall include a specific route of a bicycling and hiking trail, the relationship of the route to existing and proposed park and recreational facilities and land and water trail systems, and links to existing and proposed public transportation and transit. The transportation and transit links may include, but are not limited to, roadside bus stops, transit facilities, and transportation facilities. The continuous regional recreational corridor planned and executed pursuant to this chapter shall be called the Great California Delta Trail. The continuous regional recreational corridor shall include, but not be limited to, bikeway systems, and hiking and bicycling trails.

(b) The Great California Delta Trail plan shall do all of the following:

- (1) Provide that designated environmentally sensitive areas, including wildlife habitats and wetlands, shall not be adversely affected by the trail.
- (2) Provide for appropriate buffer zones along those portions of the bikeway system adjacent to designated environmentally sensitive areas and areas with private uses, when appropriate.
- (3) Provide that the land and funds used for any purposes under this chapter are not considered mitigation for wetlands losses.
- (4) Provide alternative routes to avoid impingement on environmentally sensitive areas, traditional hunting and fishing areas, and areas with private uses, when appropriate.
- (5) Provide that no motorized vehicles, except to the extent necessary for emergency services, including, but not limited to, medical and structural emergencies, and for handicap access, be allowed on the trail.

(c) The commission may develop and adopt the plan and the implementation program if it receives sufficient funds, from sources other than the General Fund, to finance the full costs of developing and adopting the plan. The commission shall submit the plan and the implementation program to the Legislature and each of the counties within the commission's service area not later than two years after the commission determines that sufficient funds will be available to complete the plan and implementation program.

(d) The commission shall administer the funds used in the planning of the trail.

5855. (a) The commission shall establish a technical advisory committee that shall review the trail's planning, implementation, and funding proposals. The committee shall include members and staff of appropriate regional government associations, local jurisdictions, and districts. Participation in the committee is voluntary and its members are not eligible for reimbursement from the state for costs incurred to participate. The committee may make recommendations, to the commission, on the trail's planning, implementation, and funding. The executive director of the commission shall convene the meetings of the committee.

(b) A cooperative working relationship shall be established with state and federal agencies, and all other cities, counties, districts, including school districts, and regional government associations that are affected by the proposed trail.

(c) The commission shall establish a stakeholder advisory committee representing groups concerned with environmental and ecological protection of the delta, groups representing agricultural, private, and other business uses of the delta's land and water, and groups representing bicycling, walking, boating, horseback riding, and other relevant recreational activities. The stakeholder advisory committee shall advise the commission on the trail's impacts on and uses for committee member constituencies. Participation in the committee is voluntary and its members are not eligible for reimbursement from the state for costs incurred to participate. The committee may make recommendations, to the commission, on the trail's planning, implementation, and funding. The executive director of the commission shall convene the meetings of the stakeholder advisory committee.

(d) The meetings of the committees established in subdivisions (a) and (c) shall be subject to the provisions of the Bagley-Keene Open Meeting Act Article 9 (commencing with Section 11120) of Chapter 1 of Part 1 of Division 3 of Title 2 of the Government Code).

SEC. 3. Section 99234 of the Public Utilities Code is amended to read:

99234. (a) Claims for facilities provided for the exclusive use of pedestrians and bicycles or for bicycle safety education programs shall be filed according to the rules and regulations adopted by the transportation planning agency.

(b) The money shall be allocated for the construction, including related engineering expenses, of those facilities pursuant to procedures or criteria established by the transportation planning agency for the area within its jurisdiction, or for bicycle safety education programs.

(c) The money may be allocated for the maintenance of bicycling trails that are closed to motorized traffic pursuant to procedures or criteria established by the transportation planning agency for the area within its jurisdiction.

(d) The money may be allocated without respect to Section 99231 and shall not be included in determining the apportionments to a city or county for purposes of Sections 99233.7 to 99233.9, inclusive.

(e) Facilities provided for the use of bicycles may include projects that serve the needs of commuting bicyclists, including, but not limited to, new trails serving major transportation corridors, secure bicycle parking at employment centers, park and ride lots, and transit terminals where other funds are unavailable.

(f) Notwithstanding any other provision of this section, a planning agency established in Title 7.1 (commencing with Section 66500) of the Government Code may allocate the money to the Association of Bay Area Governments for activities required by Chapter 11 (commencing with Section 5850) of Division 5 of the Public Resources Code.

(g) Notwithstanding any other provision of this section, the transportation planning agencies that allocate funds, pursuant to this section, to the cities and counties with jurisdiction or a sphere of influence within the delta, as defined in Section 5852 of the Public Resources Code, may allocate the money to the Delta Protection Commission for activities required by Chapter 12 (commencing with Section 5852) of Division 5 of the Public Resources Code.

(h) Within 30 days after receiving a request for a review from any city or county, the transportation planning agency shall review its allocations made pursuant to Section 99233.3.

(i) In addition to the purposes authorized in this section, a portion of the amount available to a city or county pursuant to Section 99233.3 may be allocated to develop a comprehensive bicycle and pedestrian facilities plan, with an emphasis on bicycle projects intended to accommodate bicycle commuters rather than recreational bicycle users. An allocation under this subdivision may not be made more than once every five years.

(j) Up to 20 percent of the amount available each year to a city or county pursuant to Section 99233.3 may be allocated to restripe class II bicycle lanes.

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Appendix B. Existing Policy Analysis

This appendix reviews the planning and policy documents pertinent to the Delta Trail in Contra Costa and Solano Counties. Due to the broad scope of the Delta Trail, only County and regional plans are reviewed.

This policy review was prepared as a component of the Great California Delta Trail Blueprint Report by the Rivers, Trails and Conservation Assistance Program of the National Park Service with cooperation from the Delta Protection Commission and Alta Planning and Design.

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Agency	Document	Plan Element: (vision, goal, objective, policy, etc.)
CONTRA COSTA COUNTY GENERAL PLAN		
Contra Costa County	Land Use Designations- Residential Density and Land Use Intensity	<p>Delta Recreation and Resources (DR): This land use designation encompasses the islands and adjacent lowlands of the San Joaquin-Sacramento Delta, excluding Bethel Island and the community of Discovery Bay which have separate land use designations on the Land Use Map. Most of the lands designated Delta Recreation and Resources are within the 100-year flood plan mapped by FEMA, which means that the area is subjected to periodic flooding.</p> <p>Due to their proximity to the Delta waterways, these lands have potential recreational value. The purpose of the Delta Recreation and Resources designation is to balance the recreational opportunities of the area against the need to allow only low intensity uses which will not subject large numbers of residents or visitors to flood dangers. Agriculture and wildlife habitat is to be considered the most appropriate uses in the area, with limited recreation uses allowed which do not conflict with the predominant agricultural and habitat uses.</p> <p>The primary uses that are allowed in the Delta Recreation and Resources designation are those agricultural production and processing activities allowed in the Agricultural Lands designation.</p> <p>Additional uses that may be allowed through the issuance of a land use permit include: marinas, shooting ranges, duck and other hunting clubs, campgrounds and other outdoor recreation complexes.</p>
Contra Costa County	Land Use Designations- Residential Density and Land Use Intensity	<p>Open Space (OS). This General Plan designation includes public owned, open space lands which are not designated as “Public and Semi-Public,” “Watershed,” or “Parks and Recreation.” Lands designated “Open Space” include, without limitation, wetlands and tidelands and other areas of significant ecological resources, or geologic hazards</p> <p>The “Open Space” designation also includes privately owned properties for which future development rights have been deeded to a public or private agency. For example, significant open space areas within planned unit developments identified as being owned and maintained by a homeowners association fall under this designation. Also included are the steep, unbuildable portions of approved subdivisions which may be deeded to agencies such as the, EBRPD but which have not been developed as park facilities. Other privately owned lands have been designated as “Open Space” consistent with adopted city General Plans.</p> <p>The most appropriate uses in “Open Space” areas involve resource management, such as maintaining critical marsh and other endangered habitats or establishing “safety zones” around identified geologic hazards. Other appropriate uses are low intensity, private recreation for nearby residents. The construction of permanent structures, excluding a single-family residence on an existing legally established lot, not oriented recreation or resource conservation, is inconsistent with this open space designation. One single family residence on an existing legal lot is consistent with adopted city General Plans.</p>
Contra Costa County	Land Use Designations - Residential Density and Land Use Intensity	<p>Parks and Recreation (PR). The “Parks and Recreation” designation includes publicly owned city, district, County and regional parks facilities, as well as golf courses, whether publicly or privately owned.</p> <p>Appropriate uses in the designation are passive and active recreation-oriented activities, and ancillary commercial uses such as snack bars, and restaurants.</p>

Agency	Document	Plan Element: (vision, goal, objective, policy, etc.)
Contra Costa County	Land Use Designations - Residential Density and Land Use Intensity	Water (WA). This designation is applied to approximately 68 square miles of water in the San Francisco-San Pablo Bay and Sacramento-San Joaquin River estuary system which is within the County. The designation is also applied to all large inland bodies of water such as reservoirs. Uses allowed in the “Water” designation area include transport facilities associated with adjacent heavy industrial plants, such as ports and wharves; and water-oriented recreation uses such as boating and fishing.
Contra Costa County	Land Use Goals, Policies and Implementation Measures; Goal 3-A	To coordinate land use with circulation, development of other infrastructure facilities, and protection of agriculture and open space, and to allow growth and the maintenance of the County's quality of life. In such an environment all residential, commercial, industrial, recreational and agricultural activities may take place in safety, harmony, and to mutual advantage.
Contra Costa County	Land Use Goals, Policies and Implementation Measures; Goal 3-H	To adopt and implement an innovative Countywide Growth Management Program which effectively links land use policy with transportation and other infrastructure improvements.
Contra Costa County	Land Use Goals, Policies and Implementation Measures; Policy 3-6	Development of all urban uses shall be coordinated with provision of essential community services or facilities including, but not limited to, roads, law enforcement and fire protection services, schools, parks, sanitary facilities, water and flood control.
Contra Costa County	Land Use Goals, Policies and Implementation Measures; Policy 3-7	The location, timing and extent of growth shall be guided through capital improvements programming and financing (ie. A capital improvement program, assessment districts, impact fees, and developer contributions) to prevent infrastructure, facility and service deficiencies.
Contra Costa County	Land Use Goals, Policies and Implementation Measures; Policy 3-12	Preservation and buffering of agricultural land should be encouraged as it is critical to maintaining a healthy and competitive agricultural economy and assuring a balance of land uses. Preservation and conservation of open space, wetlands, parks, hillsides and ridgelines should be encouraged as it is critical to preserve the continued availability of unique habitats for wildlife and plants, to protect unique scenery and provide a wide range of recreational opportunities for county residents.
Contra Costa County	Land Use Goals, Policies and Implementation Measures; Policy 3-13	Promote cooperation between the County and cities to preserve agricultural and open space land.
Contra Costa County	Land Use Goals, Policies and Implementation Measures; Policy 3-19	Buffers shall be provided between new industrial developments and residential areas by establishing setbacks, and park-like landscaping or other appropriate mechanisms.
Contra Costa County	Land Use Goals, Policies and Implementation Measures; Policy 3-25	Innovation in site planning and design of housing developments shall be encouraged in order to upgrade quality and efficiency of residential living arrangements and to protect the surrounding environment.
Contra Costa County	Land Use Goals, Policies and Implementation Measures; Policy 3-39	Existing employment areas shall be improved to create better pedestrian circulation, bicycle paths and adequate parking.

Agency	Document	Plan Element: (vision, goal, objective, policy, etc.)
Contra Costa County	Land Use Goals, Policies and Implementation Measures; Policy 3-46	Water-oriented recreation uses shall be permitted in East County provided that such development is compatible with the Delta's unique ecology.
Contra Costa County	Land Use Goals, Policies and Implementation Measures; Implementation Measure 3-a	Revise the County Zoning Ordinance and other ordinances to conform with the land use designations included in this General Plan, e.g., delete the F-R, U,A-1, and F-1 zoning districts; create a new Commercial Recreation district.
Contra Costa County	Land Use Goals, Policies and Implementation Measures; Implementation Measure 3-c	Where appropriate, require the dedication of deeded development rights to the County (or cooperate in dedication to other public agencies) for lands to be protected as open space.
Contra Costa County	Land Use Goals, Policies and Implementation Measures; Implementation Measure 3-k	Institute the Growth Management Program described in Section 4, taking into account fiscal constraints in accordance with Measure C-1988. Enforce traffic level of service (LOS) standards and performance standards for fire, police, parks, sanitary facilities, water and flood control.
Contra Costa County	Land Use Goals, Policies and Implementation Measures; Implementation Measure 3-l	Prepare and adopt a five-year capital improvement and financing program for the purpose of meeting and maintaining traffic service and facilities performance standards for fire, police, parks, sanitary facilities, water and flood control.
Contra Costa County	Land Use Goals, Policies and Implementation Measures; Implementation Measure 3-u	To the extent feasible, enter into preservation agreements with cities designed to preserve land for agriculture, open space, wetlands or parks.
Contra Costa County	Land Use Goals, Policies and Implementation Measures; Policies for East County Area 3-47	Plan directs most of the residential and commercial growth that is anticipated to occur in the unincorporated East County area during the planning period into the Oakley community, with smaller amounts of recreation-oriented development allowed on Bethel Island.
Contra Costa County	Land Use Goals, Policies and Implementation Measures; Policies for East County Area 3-48	Docks and marinas permitted by the implementing zoning district shall be considered for approval in certain designated Delta Recreation areas based upon the following criteria: <ul style="list-style-type: none"> • where projects can be clustered and located adjacent to similar uses; • along waterways having an adequate channel width as defined by the State Harbors and Navigation Code; • in areas having adequate public vehicular access; • where off-site improvements, such as required access roads, can be assigned to development; • where adequate on-site sewage disposal can be provided; • where located in an area served by a public fire protection district; and • where such uses will not conflict with adjacent agricultural uses.
Contra Costa County	Land Use Goals, Policies and Implementation Measures; Policies for the Primary Zone of the Delta 3-54	All public and private management and development activities within the Primary Zone of the Delta shall be consistent with the goals, policies and provisions of the Land Use and Resource Management Plan for the Primary zone of the Delta as adopted and as may be amended by the Delta Protection Commission.

Agency	Document	Plan Element: (vision, goal, objective, policy, etc.)
Contra Costa County	Land Use Goals, Policies and Implementation Measures; Policies for the Bethel Island Area 3-63	Marine and waterfront facilities will require a use permit to address site-specific aquatic and other issues such as wetlands, water quality, public access, and the Delta's carrying capacity for such facilities in the Bethel Island Area.
Contra Costa County	Land Use Goals, Policies and Implementation Measures; Policies for the Bethel Island Area 3-64	To retain the characteristics of Bethel Island that make it an unique place in the Delta with its own separate identity, development shall be limited to a low overall density, and open space buffers shall be required. In addition, agricultural, open space, and wetland areas, along with rare plant communities, shall be preserved and protected.
Contra Costa County	Land Use Goals, Policies and Implementation Measures; Policies for the Bethel Island Area 3-66	A Protection Fee shall be imposed on each new residential unit in the Bethel Island Area to acquire development rights on agricultural lands, open space or wetlands areas, or to provide financing for farmers to continue agricultural production. Priority for the acquisition of open space and wetlands shall be given to the on-island area. Additional funding sources shall be explored to supplement or replace the Protection Fee.
Contra Costa County	Land Use Goals, Policies and Implementation Measures; Policies for the Southeast County Area 3-69	The Southeast county area is almost exclusively planned for agricultural, watershed, or public purposes. New land uses within this plan area should be limited to those which are compatible to the primary agricultural and watershed purposes of the area (farming, ranching, poultry raising, animal breeding, aviaries, apiaries, horticulture, floriculture and similar agricultural uses and structures) and consistent with the multiple use philosophy enumerated by this plan. Plan identifies public and private outdoor recreational facilities as a use that is consistent with the planned agricultural areas.
Contra Costa County	Land Use Goals, Policies and Implementation Measures; Policies for the Port Costa Area 3-123	The Plan endorses the establishment of a regional recreation area in the vicinity of Port Costa which is oriented towards pedestrian use and day use.
Contra Costa County	Land Use Goals, Policies and Implementation Measures; Policies for the Port Costa Area 3-124	A key concept of the Plan is to permit only open space uses on the lands surrounding the village, as well as the balance of the planning area.
Contra Costa County	Land Use Goals, Policies and Implementation Measures; Policies for the Crockett Area 3-138(d)	Public facilities for outdoor recreation should remain an important land utilization objective in the community, to promote high visual quality, air quality maintenance, and to enhance outdoor recreation opportunities of all residents.
Contra Costa County	Land Use Goals, Policies and Implementation Measures; Policies for the Rodeo Area 3-147	Develop a portion of the Rodeo Creek channel as a linear park.
Contra Costa County	Land Use Goals, Policies and Implementation Measures; Policies for the Rodeo Area 3-148	Maximize public access to the bay.

Agency	Document	Plan Element: (vision, goal, objective, policy, etc.)
Contra Costa County	Land Use Goals, Policies and Implementation Measures; Policies for the North Richmond Area 3-174	<p>For all industrial categories, the Plan should accommodate and guide the growth and development of industry. With growth and development there needs to be a recognition of environmental, social and economic values which will work to minimize land use conflicts, to establish a reasonably pleasing setting and to protect natural resources that are irreplaceable. Through appropriate regulatory mechanisms (e.g., zoning ordinance, nuisance ordinance, etc.) provide for the following:</p> <p>Require setbacks within shoreline areas to protect wetlands designated by State or Federal regulatory agencies and to provide public access as appropriate. The size of the setback or mitigation will be developed in conjunction with all affected agencies.</p> <p>Require projects adjacent to parks or recreational corridors to minimize impacts on the recreational values of those facilities.</p>
Contra Costa County	Implementation Measures; 4-l	The County will adopt a development mitigation program to ensure that new development pays its fair share of the cost of providing police, fire, parks, water, sewer and flood control facilities.
Contra Costa County	Implementation Measures; 4-o	All new development shall contribute to, or participate in, the improvements of the parks, fire, police, sewer, water and flood control systems in reasonable proportion to the demand impacts and burdens generated by project occupants and users.
Contra Costa County	Existing and Future Transportation Needs - bikeways	County is currently participating in a countywide effort sponsored by CCTA to evaluate ways of increasing the use of bicycles for transportation.
Contra Costa County	Roadway and Transit Policies; Alternative Transportation/Circulation Systems 5-25	Planning and provision for a system of safe and convenient pedestrian ways, bikeways and regional hiking trails shall be continued as a means of connecting community facilities, residential areas, and business districts, as well as points of interest outside the communities utilizing existing public and semi-public right-of-way.
Contra Costa County	Roadway and Transit Implementation Measures; Circulation Phasing and Coordination 5-h	The County shall work with cities to develop Specific Plans for abandoned railroad right-of-ways that traverse unincorporated areas.
Contra Costa County	Roadway and Transit Implementation Measures; Alternative Transportation/Circulation Systems 5-w	Provide safe pedestrian ways in the vicinity of schools and other public facilities, and in commercial areas, and provide convenient access to bus routes.
Contra Costa County	Roadway and Transit Implementation Measures; Alternative Transportation/Circulation Systems 5-x	Construct bikeways shown in the future Bikeway Network Plan and incorporate the needs of bicyclists in major roadway construction projects and normal safety and operational improvements.

Agency	Document	Plan Element: (vision, goal, objective, policy, etc.)
Contra Costa County	Roadway and Transit Implementation Measures; Alternative Transportation/Circulation Systems 5-ai	Design and allow for on-road bikeways on arterials and collectors as an alternative to car travel where this can be safely accommodated.
Contra Costa County	5.8 bikeways	In March 2002 the Contra Costa Transportation Authority initiated a cooperative effort with the cities and the county to prepare a Countywide Bicycle and Pedestrian Plan. The outcome of this planning effort will be evaluated by the Board of Supervisors to determine the portions of the plan to implement through the General Plan.
Contra Costa County	5.8 bikeways; Bikeway Goals 5-L	Increase the opportunities for bicycle use in Contra Costa County for transportation as well as recreational purposes.
Contra Costa County	5.8 bikeways; Bikeway Goals 5-M	Develop a coordinated, interjurisdictional Countywide network of bikeways that connect residential areas with major employment, commercial, educational, transit and cultural centers.
Contra Costa County	5.8 bikeways; Bikeway Goals 5-N	Assure adequate long-term maintenance of the bikeway system.
Contra Costa County	5.8 bikeways; Bikeway Goals 5-O	Improve bicycle education for both bicyclists and automobile drivers and promote bicycles as a mode of transportation, particularly for commuting.
Contra Costa County	5.8 bikeways; Bikeway Goals 5-P	Provide secure bicycle parking facilities at appropriate locations and improved access to transit systems.
Contra Costa County	5.8 bikeways; Bikeway Goals 5-Q	Promote bikeway planning and coordination among cities, transit agencies and public utilities.
Contra Costa County	5.9 Scenic Routes; Scenic Route Goals 5-R	To identify, preserve and enhance scenic routes in the County.
Contra Costa County	5.9 Scenic Routes; Scenic Route Policies 5-36	The planning of scenic corridors shall be coordinated with and maximize access to public parks, recreation areas, bike trails, cultural attractions, and other related public developments.
Contra Costa County	5.9 Scenic Routes; Scenic Route Policies 5-39	Multiple recreation use, including trails, observation points, and picnicking spots, where appropriate, shall be encouraged along scenic routes.
Contra Costa County	Vegetation and Wildlife Goals 8-F	To encourage the preservation and restoration of natural characteristics of the San Francisco Bay/Delta estuary and adjacent lands, and recognize the role of Bay vegetation and water area in maintaining favorable climate, air and water quality, and fisheries and migratory waterfowl.
Contra Costa County	Vegetation and Wildlife Policies 8-34	Urban developments shall be required to establish effective buffers between them and land planned for agricultural uses.
Contra Costa County	Goal 9-A	To preserve and protect the ecological, scenic and cultural/historic, and recreational resource lands of the County.

Agency	Document	Plan Element: (vision, goal, objective, policy, etc.)
Contra Costa County	Goal 9-B	To conserve the open space and natural resources of the County through control of the direction, extent and timing of urban growth.
Contra Costa County	Goal 9-C	To achieve a balance of open space and urban areas to meet the social, environmental and economic needs of the County now and for the future.
Contra Costa County	Policy 9-1	Permanent open space shall be provided within the County for a variety of open space uses.
Contra Costa County	Policy 9-2	Historic and scenic features, watersheds, natural waterways, and areas important for the maintenance of natural vegetation and wildlife populations shall be preserved and enhanced.
Contra Costa County	Policy 9-3	Areas designated for open space shall not be considered as a reserve for urban land uses. In accordance with Measure C-1990, at least 65 percent of all land in the County shall be preserved for agriculture, open space, wetlands, parks and non-urban uses.
Contra Costa County	Policy 9-4	Where feasible and desirable, major open space components shall be combined and linked to form a visual and physical system in the County.
Contra Costa County	Policy 9-5	The visual identities of urban communities shall be preserved through the maintenance of existing open space areas between cities and/or communities.
Contra Costa County	Policy 9-6	Open Space acquisition shall be planned and funded, in concert with the region's staged transportation, landfill, and water and sewage plant programs.
Contra Costa County	Policy 9-7	Open Space shall be utilized for public safety, resource conservation and appropriate recreation activities for all segments of the community.
Contra Costa County	Policy 9-8	Development project environmental review will consider the effect of the project on the County's open space resources, whenever the project proposes to convert substantial amounts of land from an open space designation to an urban development designation.
Contra Costa County	Policy 9-9	The County shall preserve open space lands located outside the Urban Limit Line by declining to authorize requests for general plan amendment studies which would result in redesignation of such lands to urban land use designations. The County shall not designate any open space land located outside the ULL for an urban use. A substantial portion of land developed within the ULL shall be retained for open space, parks and recreational uses.
Contra Costa County	Scenic Resources Goal 9-12	To preserve the scenic qualities of the San Francisco Bay/Delta estuary system and the Sacramento-San Joaquin River/Delta shoreline.
Contra Costa County	Scenic Resources Policies 9-16	Providing public facilities for outdoor recreation should remain an important land use objective for the County, as a method of promoting high scenic quality, for air quality maintenance, and to enhance outdoor recreation opportunities for all residents.

Agency	Document	Plan Element: (vision, goal, objective, policy, etc.)
Contra Costa County	Scenic Resources Implementation Measures 9-b	Carefully study and review any development projects which would have the potential to degrade the scenic qualities of major significant ridges in the County or the bay and delta shoreline.
Contra Costa County	Scenic Resources Implementation Measures 9-e	Develop and enforce guidelines for development along scenic waterways to maintain the visual quality of these areas.
Contra Costa County	Scenic Resources Implementation Measures 9-h	Identify and designate "gateways" within the scenic routes which are located at unique transition points in topography or land use and serve as entrances to regions of the County.
Contra Costa County	Park and Recreation Facilities Goals 9-36	To develop a sufficient amount of conveniently located, properly designed park and recreational facilities to serve the needs of all residents.
Contra Costa County	Park and Recreation Facilities Goals 9-37	To develop a system of interconnected hiking, riding and bicycling trails and paths suitable for both active recreational use and for the purpose of transportation/circulation.
Contra Costa County	Park and Recreation Facilities Goals 9-38	To promote active and passive recreational enjoyment of the County's physical amenities for the continued health, safety and welfare of the citizens of the County.
Contra Costa County	Park and Recreation Facilities Goals 9-39	To achieve a level of park facilities of four acres per 1,000 population.
Contra Costa County	Park and Recreation Facilities Goals 9-43	Regional-scale public access to scenic areas on the waterfront shall be protected and developed, and water-related recreation, such as fishing, boating, and picnicking, shall be provided.
Contra Costa County	Park and Recreation Facilities Goals 9-44	As a unique resource of State-wide importance, the Delta shall be developed for recreation use in accordance with the State environmental goals and policies. The recreational value of the Delta shall be protected and enhanced.
Contra Costa County	Park and Recreation Facilities Goals 9-45	Public funds from agencies such as the Department of Fish and Game shall be utilized to purchase levees and acquire easements.
Contra Costa County	Park and Recreation Facilities Goals 9-46	Public trail facilities shall be integrated into the design of flood control facilities and other public works whenever possible.
Contra Costa County	Park and Recreation Facilities Goals 9-47	Regional development shall be allowed only in a manner which complements the natural features of the area, including the topography, waterways, vegetation and soil characteristics.
Contra Costa County	Park and Recreation Facilities Goals 9-48	Recreational activity shall be distributed and managed according to an area's carrying capacity with special emphasis on controlling adverse environmental impacts, such as conflict between uses and trespass. At the same time, the regional importance of each area's recreation resources shall be recognized.
Contra Costa County	Park and Recreation Facilities Implementation Measures 9-q	Complete a comprehensive study of all open space lands in the County to determine the areas that are most suitable for future park acquisition.

Agency	Document	Plan Element: (vision, goal, objective, policy, etc.)
Contra Costa County	Park and Recreation Facilities Implementation Measures 9-r	Require that new development meet the park standards and criteria included in the growth management program and set forth in Table 7-3. Ensure that credit for the park dedication ordinance requirements be given for private recreation facilities only after a finding has been adopted that the facilities will be open to and serve the public.
Contra Costa County	Park and Recreation Facilities Implementation Measures 9-s	<p>Permit additional marinas to serve the Delta and the Bay in select areas if they meet the following criteria:</p> <ul style="list-style-type: none"> • where projects can be clustered and located adjacent to similar uses; • along waterways having an adequate channel width as defined by the State Harbors and Navigation Code; • in areas having adequate public vehicular access; • where off-site improvements, such as required access roads, can be assigned to development; • where adequate on-site sewage disposal can be provided; • where located in an area served by a public fire protection district; and • when such uses will not conflict with adjacent agricultural uses.
Contra Costa County	Park and Recreation Facilities Implementation Measures 9-t	Coordinate with the various school districts in the County to provide for the joint use of recreation facilities.
Contra Costa County	Park and Recreation Facilities Implementation Measures 9-u	Coordinate funds and programs administered by County government and other agencies, such as the East Bay Regional Park District, to obtain optimum recreation facilities development.
Contra Costa County	Park and Recreation Facilities Implementation Measures 9-v	Develop a comprehensive and interconnected series of hiking, biking and riding trails in conjunction with cities, special districts, public utilities and county services.
Contra Costa County	Park and Recreation Facilities Implementation Measures 9-w	Form a county-wide committee to explore funding sources for recreation and open space to support regional, community and local park and trails on a county-wide basis.
Contra Costa County	Park and Recreation Facilities Implementation Measures 9-x	Work with local unincorporated communities to determine the means of providing local park services where the need presently exists, as well as when development occurs.
Contra Costa County	Park and Recreation Facilities Implementation Measures 9-y	Increase the park dedication fee to a level which approaches the local park dedication standards called for in this Plan.
COUNTYWIDE BICYCLE AND PEDESTRIAN PLAN, CONTRA COSTA COUNTY		
Contra Costa County	Goals and Policies, Goal 1	Expand, improve, and maintain facilities for bicycling and walking.
Contra Costa County	Goals and Policies, Goal 1 - Policy 1.1	Describe a system of bicycle facilities and key attractors of bicycle and pedestrian traffic including existing and future bicycle facilities of county-wide importance, more local bicycle facilities that interconnect with and support the Countywide Bicycle Network, and programmatic needs for improving pedestrian and bicycle access to and within transit stations and centers, schools, job centers, and other activity centers and facilities.

Agency	Document	Plan Element: (vision, goal, objective, policy, etc.)
Contra Costa County	Goals and Policies, Goal 1 - Policy 1.2	Identify gaps in the Countywide Bicycle Network, and needed improvements to and within pedestrian districts and key activity centers, and define priorities for eliminating these gaps and making needed improvements.
Contra Costa County	Goals and Policies, Goal 1 - Policy 1.3	Determine funding needs to expanding and improving bicycle and pedestrian facilities, and support local efforts to find, apply for, and receive funding to meet those needs.
Contra Costa County	Goals and Policies, Goal 1 - Policy 1.4	Use the Countywide Bicycle and Pedestrian Plan to guide how best to allocate funding under the control of the Authority for regional or countywide bicycle and pedestrian projects and programs, while allowing jurisdictions flexibility in funding local projects.
Contra Costa County	Goals and Policies, Goal 1 - Policy 1.5	Encourage routine maintenance of bikeway and walkway network facilities, as funding and priorities allow, including regular sweeping of bikeways and shared use pathways. Programs to support these efforts could include sidewalk repair programs, which could include incentives to property owners to improve adjoining sidewalks beyond any required maintenance; online forms for the general public to report problems; and "Adopt a Trail" programs that involve volunteers for trail clean-up and other minor maintenance.
Contra Costa County	Goals and Policies, Goal 1 - Policy 1.6	Include the costs of major maintenance needs of bicycle and pedestrian facilities when calculating the maintenance needs of streets and roadways generally.
Contra Costa County	Goals and Policies, Goal 2	Improve safety for bicyclists and pedestrians.
Contra Costa County	Goals and Policies, Goal 2 - Policy 2.1	Monitor and evaluate information on collisions involving bicyclists and pedestrians and provide this information to local agencies to assist in remedying existing problem locations.
Contra Costa County	Goals and Policies, Goal 2 - Policy 2.2	Work with Contra Costa County on a countywide collision data analysis program that will generate collision rates useful for planning purposes.
Contra Costa County	Goals and Policies, Goal 2 - Policy 2.3	Support the development and implementation of effective programs to educate drivers, bicyclists and pedestrians as to their rights and responsibilities, and adult and youth pedestrian and bicycle education and safety programs.
Contra Costa County	Goals and Policies, Goal 3	Encourage more people to bicycle and walk.
Contra Costa County	Goals and Policies, Goal 3 - Policy 3.1	Work with local and regional agencies to develop useful and cost-effective programs to encourage more people to walk and bicycle.
Contra Costa County	Goals and Policies, Goal 3 - Policy 3.2	Encourage traffic calming, intersection improvements, or other similar actions that improve safety for pedestrians and bicyclists.
Contra Costa County	Goals and Policies, Goal 4	Support local efforts to encourage walking and bicycling.
Contra Costa County	Goals and Policies, Goal 4 - Policy 4.1	Work with local agencies to develop a coordinated countywide approach to signage.

Agency	Document	Plan Element: (vision, goal, objective, policy, etc.)
Contra Costa County	Goals and Policies, Goal 4 - Policy 4.2	Provide a forum for local jurisdictions and agencies to discuss and help resolve bicycle and pedestrian issues of mutual concern and to develop countywide or subregional approaches that could help overcome obstacles standing in the way of achieving the goals of the plan.
Contra Costa County	Goals and Policies, Goal 4 - Policy 4.3	Work with a committee of local agency staff and bicyclists and pedestrians to develop, update and help implement the Countywide Bicycle and Pedestrian Plan. The CBPP will be updated at least as often as necessary to maintain eligibility for BTA funding.
Contra Costa County	Goals and Policies, Goal 4 - Policy 4.4	Support local efforts to refine their development standards to require the construction of bicycle and pedestrian facilities, where warranted, as a condition of approval of new development or major redevelopment projects. This support could include providing information useful to local agencies in planning, designing, and implementing improvements to the bicycle and pedestrian network
Contra Costa County	Goals and Policies, Goal 5	Plan for the needs of bicyclists and pedestrians.
Contra Costa County	Goals and Policies, Goal 5 - Policy 5.1	Accommodate, and encourage other agencies to accommodate, the needs for mobility, accessibility, and safety of bicyclists and pedestrians when planning, designing, and developing transportation improvements.
Contra Costa County	Goals and Policies, Goal 5 - Policy 5.2	Support the incorporation of bicycle and pedestrian facilities into other capital improvement projects, where appropriate, to expand bicycle-pedestrian facilities, harmonize the needs of all travel modes, and achieve economies of scale.
SOLANO COUNTY GENERAL PLAN		
Solano County	Goals; LU.G-3	Create sustainable communities with areas for employment, shopping, housing, public facilities and services, and recreation in close proximity to each other.
Solano County	Goals; LU.G-4	Encourage land use development patterns and circulation and transportation systems that promote health and wellness and minimize adverse effects on agriculture and natural resources, energy consumption, and air quality.
Solano County	Policies; LU.P-34	Promote patterns of development that encourage physical activity to reduce obesity, cardiovascular disease, asthma, diabetes, or injury; and that contribute to a "sense of place" and emotional well-being.
Solano County	Policies; LU.P-36	Promote land use decisions that reduce injuries (pedestrian, bicycle, and motor vehicle crashes), and provide access to healthy food choices, including locally grown fresh fruits and vegetables throughout the county.
Solano County	Policies; LU.P-37	Encourage land use patterns and development that will result in fewer and shorter motor vehicle trips, and make transportation choices like transit, biking, or walking more viable alternatives.
Solano County	Regulations; LU.I-11	When reviewing development proposals, work with applicants to establish development patterns that result in shorter motor vehicle trips, make alternative transit modes viable, and encourage physical activity.

Agency	Document	Plan Element: (vision, goal, objective, policy, etc.)
Solano County	Regulations; LU.I-12	When reviewing development proposals, work with applicant to achieve project and street designs that create cleaner air and water and safer streets, reducing injuries to pedestrians, bicyclists, and motorists from crashes.
Solano County	Regulations; LU.I-19	Coordinate with the Metropolitan Transportation Commission, Solano Transportation Authority and the California Department of Transportation to ensure that transportation planning and improvement programs are consistent with this chapter.
Solano County	Goals	Preserving additional values of agricultural land, including important scenic value within the rural environment, providing habitat, providing options for recreation, and serving as community separators defining the county's distinct cities.
Solano County	Policies; AG.P-17	Minimize potential conflicts between automobile and bicycle traffic and agricultural operations through transportation planning and capital improvement efforts.
Solano County	Policies; AG.P-23	Support recreation and open space activities that are complementary and secondary to the primary agricultural activities on the land.
Solano County	Policies; AG.P-34	Lands within the Agriculture designations may be redesignated to Park & Recreation only for public recreation and public open space uses and only if the uses permitted by the new designation will not interfere with or be in conflict with agricultural operations.
Solano County	Regulations; AG.I-8	In coordination with programs in the Transportation and Circulation chapter, create a comprehensive plan for roadway improvements to support agricultural needs. The plan shall include increased connectivity across I-80 for farmers and their equipment, turnouts on agricultural roads, and grading/paving of unimproved roads. The plan shall also provide strategies to reduce automobile and bicycle conflicts with agricultural operations throughout the county. Recommendations shall be integrated into County transportation plans, recreation plans, and capital improvement programs. Partner with cities and the Solano Transportation Authority to address funding strategies for planned facilities.
Solano County	Regulations; AG.I-13	Support recreation and open space activities that are complementary and secondary to agricultural activities on the land. Encourage agriculturalists to incorporate compatible recreational and educational activities that provide visitor-oriented opportunities into agricultural land in appropriate areas, minimizing the adverse impact on agriculture.
Solano County	Regulations; AG.I-14	Implement the Orderly Growth Initiative by redesignating lands to Park and Recreation only for public uses and only if the uses permitted will not interfere with or be in conflict with agricultural operations.
Solano County	Sacramento-San Joaquin Delta Policies; RS.P-26	Promote continued recreational use of the land and waters of the Delta, including fishing and boating; ensure needed recreational facilities are constructed, maintained, and supervised; protect landowners from unauthorized recreational uses on private lands; and maximize dwindling public funds for recreation by promoting public private partnerships and multiple uses of Delta lands consistent with the Land Use and Resource Management Plan for the Primary Zone of the Delta.

Agency	Document	Plan Element: (vision, goal, objective, policy, etc.)
Solano County	Recreational Resources; Planning Context	High quality and extensive recreational resources can greatly add to residents' quality of life. The County has the opportunity to expand its recreational resources by creating a connected trail network, improved bicycle routes, and additional parks and fishing access points. A second opportunity exists if federal, state, County, and city agencies coordinate efforts to implement recommendation and programs in the Park and Recreation chapter. Such coordination could result in greater recreation opportunities for the region's residents.
Solano County	Recreational Resources - Policies; RS.P-41	Provide trail links and an integrated trail system to connect people to accessible open spaces and to regional trail routes.
Solano County	Recreational Resources - Policies; RS.P-42	Encourage the use of existing natural and human-made corridors such as creeks, railroad rights of way, and corridors when creating future bike path and trail alignments.
Solano County	Recreational Resources - Policies; RS.P-43	Support countywide recreation planning.
Solano County	Recreational Resources - Policies; RS.P-44	Support the provision of public lands for use in a trail network and where private land is necessary for creating connections for bike path or trail alignments, work collaboratively with property owners to secure easements across private lands.
Solano County	Recreational Resources - Policies; RS.P-45	Support the completion of regional trails that link destinations within Solano County and beyond, including the San Francisco Bay Trail, the Bay Area Ridge Trail and Carquinez Trust Trail Plan.
Solano County	Recreational Resources - Policies; RS.P-46	Encourage local farmers and ranchers to incorporate recreational and educational activities that provide visitor-oriented opportunities into agricultural land, in areas deemed appropriate for such opportunities.
Solano County	Recreational Resources - Policies; RS.P-47	Require recreational uses to be established in a manner compatible with agricultural activities or that minimizes an adverse impact on agriculture.
Solano County	Recreational Resources - Policies; RS.P-48	Maintain and expand public access and recreational activities within the Suisun Marsh consistent with applicable marsh policies and the protection of wildlife resources.
Solano County	Recreational Resources - Implementation Programs; RS.I-31	Seek funding to purchase land for public recreation and access to Suisun Marsh for such uses as fishing, boat launching, nature study, and for scientific and educational uses. These areas should be located on the outer portions of Suisun Marsh near the population centers and easily accessible from existing roads. Improvements for public use should be consistent with protection of wildlife resources.
Solano County	Recreational Resources - Implementation Programs; RS.I-34	Look for successful examples of regional recreation planning or regional facilities and use those examples to influence future efforts. Such examples include Tri-City and County Cooperative Plan for Agriculture and Open Space Preservation, Green Valley Bike Path, Sonoma County Agriculture and Open Space Preservation District, Marin County Open Space District and East Bay Regional Park District.
Solano County	Recreational Resources - Implementation Programs; RS.I-35	Monitor levels of use in the Suisun Marsh to ensure that use intensity is compatible with other recreation activities and with protection of the Suisun Marsh environment.

Agency	Document	Plan Element: (vision, goal, objective, policy, etc.)
Solano County	Recreational Resources - Implementation Programs; RS.I-36	Coordinate with cities, regional organizations, and neighboring counties to prepare a countywide trails plan to complete countywide and regional trail systems. These include pedestrian, bike, and equestrian trails; the Bay Area Ridge Trail; and Bay Trail.
Solano County	Community Separators - Policies; RS.P-63	Encourage cities to maintain defined community separators in appropriate productive agricultural or open space use.
Solano County	Flood Control - Regulations; HS.I-3	Revise the County Zoning Ordinance to promote recreational, open space, and agricultural uses of upstream watershed areas, where appropriate.
Solano County	Public Health - Planning Context	<p>Strategies for incorporating public health into land use and transportation decisions include the following:</p> <p>Integrating land uses such as retail, office, residential, open space, schools, and child care allows people to easily accomplish basic needs using active transportation such as bicycling or walking rather than having to drive every trip.</p> <p>Compact residential development allows more people to walk to parks, schools, transit, shops, and services. With more people in the same area able to reach these services, compact residential development helps provide greater demand for those services, increasing their long-term availability.</p> <p>Streets and buildings that address the street are built at a pedestrian scale create places that are safe, vital, and interesting for walkers, bicyclists, and transit users.</p> <p>Street and trail networks that accommodate pedestrians and bicycles and are highly interconnected reduce the time and distance needed for pedestrians and cyclists to get from one place to another and make these forms of active transportation more viable.</p> <p>Parks that are easily accessible by all neighborhoods provide opportunities for active recreations.</p>
Solano County	Public Health - Policies; HS.P-38	Integrate public health concerns into land use planning and decision making.
Solano County	Public Health - Regulations; HS.I-47	Continue implementing public health programs and services that decrease obesity rates and increase easy access to healthy foods, parks, and recreation opportunities.
Solano County	Public Health - Regulations; HS.I-50	Partner with the cities, school districts, and civic organizations to facilitate joint-use of schools and other public areas for public services such as child care and recreation.
Solano County	Public Health - Regulations; HS.I-52	Work with local community groups to initiate walking, cycling and recreation clubs, sports leagues, and educational speakers discussing issues in public health.
Solano County	Air Quality - Policies; HS.P-43	Support land use, transportation management, infrastructure and environmental planning programs that reduce vehicle emissions and improve air quality.
Solano County	Air Quality - Regulations; HS.I-53	Adopt a trip reduction ordinance and encourage employers to develop practices that reduce employees' vehicle trips. Such practices include telecommuting, provision of bicycle facilities, and provision of shuttles to public transit.

Agency	Document	Plan Element: (vision, goal, objective, policy, etc.)
Solano County	Goals; ED.P-12	Collaborate with cities; school districts and private schools; health-care providers and child care advocates; and cultural, recreational, and park resource providers to provide services that contribute to a high quality of life and help attract economic opportunities to the county.
Solano County	Implementation Programs; ED.I-2	Seek feedback on quality-of-life needs during interaction with businesses and non-County agencies. Communicate these needs and collaborate with cities; school districts and private schools; health care providers and child care advocates; and cultural, recreational, and park resource providers to provide services that contribute to a high quality of life and aid in attracting economic development opportunities to the county.
Solano County	General Transportation - Goals; TC.G-1	Maintain and improve the County's transportation systems to enhance safety, mobility, and convenience.
Solano County	General Transportation - Goals; TC.G-2	Promote coordinated approaches to creating, maintaining and improving transportation corridors and facilities by working with other jurisdictions and transportation agencies in funding and implementing projects.
Solano County	General Transportation - Goals; TC.G-3	Encourage land use patterns that maximize mobility options for commuting and other types of trips, and minimize traffic congestion and carbon footprints.
Solano County	General Transportation - Goals; TC.G-4	Encourage the use of alternative forms of transportation such as transit, walking and bicycling to alleviate congestion and promote recreation.
Solano County	General Transportation - Policies; TC.P-3	Establish land use patterns that facilitate shorter travel distances and non-auto modes of travel, and limit the extent of additional transportation improvements and maintenance that may be needed with a more dispersed land use pattern.
Solano County	General Transportation - Implementation Programs; TC.I-5	In cooperation with the Solano Transportation Agency, provide public education about options for reducing motor vehicle-related greenhouse gas emissions. Include information on trip reduction, trip linking, public transit, biking and walking, vehicle performance and efficiency, low- and zero-emissions vehicles, and ridesharing.
Solano County	Roadways - Regulations; TC.I-8	Adopt road construction standards that account for the needs of pedestrians, bicyclists, and transit.
Solano County	Rail Services - Policy; TC.P-19	Work with Solano Transportation Authority to develop strategies to remove barriers and increase commuter ridership on Amtrak passenger rail, including, but not limited to, collector bus services, bicycle and pedestrian routes to stations, bicycle parking facilities at stations, and promotional campaigns.

Agency	Document	Plan Element: (vision, goal, objective, policy, etc.)
Solano County	Nonmotorized Facilities - Planning Context	Because implementation and maintenance of pedestrian-oriented projects will continue to be important, Solano County will continue to work with other jurisdictions to provide safe travel corridors for pedestrians. Much of the planning and funding for bicycle and pedestrian facilities will involve coordination between the County, regional agencies, school districts, and park and natural resource agencies...Bicycle paths, bicycle lands, sidewalks, and pedestrian trails will need to be considered where the countywide plans suggest that projects are warranted. Specific corridor issues such as pavement widths and conditions, rights-of-way, and other design considerations may need to be identified in County implementation policies and design standards.
Solano County	Nonmotorized Facilities - Policies; TC.P-24	In collaboration with other agencies and cities, continue to plan, design, and create additional bikeways and bikeway connections to provide intercity and intercounty access and incorporate system needs when approving adjacent developments.
Solano County	Nonmotorized Facilities - Policies; TC.P-25	Encourage access to open space and recreation through the development of safe, convenient, and connected walking paths, trails, bikeways, and neighborhood-based parks and recreation options.
Solano County	Nonmotorized Facilities - Policies; TC.P-26	Accommodate pedestrians and bicyclists in the design and construction of roadway improvements on County facilities.
Solano County	Nonmotorized Facilities - Implementation Programs; TC.I-21	Design, construct, and maintain bicycle routes as described in the Countywide Pedestrian and Bicycle Plan and ensure that adequate signs and pavement markings are provided.
Solano County	Nonmotorized Facilities - Implementation Programs; TC.I-22	Pursue roadway-improvement project funding to complete bicycle path linkages between Solano County and communities.
Solano County	Nonmotorized Facilities - Implementation Programs; TC.I-23	Support applications to fund new bicycle and pedestrian facilities that close gaps in the system.
Solano County	Nonmotorized Facilities - Implementation Programs; TC.I-24	Ensure that funding priorities for investment in transportation system improvements are consistent with the land use and economic development goals and policies of the General Plan, especially as these relate to transit-supportive development and are consistent with the Regional Transportation Plan.
Solano County	Nonmotorized Facilities - Implementation Programs; TC.I-25	Require project to facilitate bicycle and walking access when feasible. Adopt development standards and guidelines that support such access.
Solano County	Nonmotorized Facilities - Implementation Programs; TC.I-26	Ensure that nonmotorized transportation systems are interconnected and include amenities such as secure bicycle parking.
Solano County	Nonmotorized Facilities - Implementation Programs; TC.I-27	Continue to participate in the Safe Routes to School program.

Agency	Document	Plan Element: (vision, goal, objective, policy, etc.)
Solano County	Goal 1	Preserve and manage a diverse system of regional parks and natural resources for the enjoyment of present and future County residents and park visitors.
Solano County	Goal 2	Promote, develop and manage diversified recreational facilities to meet the regional recreation needs of the County.
Solano County	Objective 1	Coordinate the planning and development of regional recreational facilities between federal, state, and local agencies within Solano County.
Solano County	Objective 1, Policy A	The County shall work with and assist local agencies and districts in identifying and protecting significant regional recreation resources.
Solano County	Objective 1, Policy B	The County shall work with local agencies and districts in identifying regional recreation needs, and coordinating and supporting plans and programs to address those needs.
Solano County	Objective 1, Policy C	The County shall encourage and support other public agencies and private groups in the development of regional recreation facilities that are consistent with Park and Recreation Element Objectives.
Solano County	Objective 1, Policy D	The County shall support and advocate proposals that advance County recreation goals and objectives to other agencies that may provide funding and assistance.
Solano County	Objective 1, Policy E	The County shall actively pursue cost-effective joint or reciprocal agreements with other governmental jurisdictions or private groups for the acquisition, development and operation of regional recreation facilities.
Solano County	Objective 2	Ensure that there are at least ten (10) acres of regional and local parkland per each 1,000 persons.
Solano County	Objective 2, Policy A	Through its planning role, the County shall work with other agencies and private interests to provide for adequate regional parkland and facilities.
Solano County	Objective 2, Policy B	The County shall actively participate in the planning of projects that have regional recreation benefits.
Solano County	Objective 2, Policy C	The County shall encourage and support local agency efforts to achieve their objectives for providing local park land. All local providers seek to provide at least five acres of parkland for each 1,000 persons.
Solano County	Objective 2, Policy D	The County shall seek available state and federal grant funds for acquiring and developing regional parks.
Solano County	Objective 2, Policy E	The County shall encourage and support other public agencies and private groups in the development of regional recreation facilities that are consistent with Park and Recreation Element objectives.
Solano County	Objective 3	Identify, preserve and manage significant regional recreation and natural areas.
Solano County	Objective 3, Policy A	The County shall identify natural resource areas that may provide for regional recreation opportunities.
Solano County	Objective 3, Policy C	The County shall work to protect identified recreational sites and natural resource areas.

Agency	Document	Plan Element: (vision, goal, objective, policy, etc.)
Solano County	Objective 3, Policy D	Recreation activities and facilities shall not adversely impact adjacent land uses. Special attention shall be given to the agriculture and watershed of the area in this regard. Special attention may include appropriate fencing, noise barriers and hours of operation.
Solano County	Objective 3, Policy E	Recreation activities and facilities shall not adversely impact habitats which support state and federally threatened or endangered species.
Solano County	Objective 4	Ensure that land use surrounding existing and potential County regional parks are compatible with park resources and public use.
Solano County	Objective 4, Policy A	Areas surrounding regional parks should be maintained in open space or other compatible uses to protect the natural setting and environment of the park site.
Solano County	Objective 4, Policy B	Land use development proposals adjacent to regional parks shall be reviewed for compatibility with natural and recreational features and uses of the park.
Solano County	Objective 5	Encourage appropriate multiple uses of public land for recreation and other uses.
Solano County	Objective 5, Policy A	The County shall make the optimum use of public lands by developing or promoting development of facilities that are compatible with the primary resources of the site.
Solano County	Objective 5, Policy B	The County shall support passive and active recreational uses that are compatible with the primary resources of the land.
Solano County	Facilities Development	Consideration should also be given to assuring adequate access to regional recreation sites. Opportunities exist for providing trail and public transportation linkages between sites and population centers. Necessary support facilities to accommodate projected usage of recreational facilities must also be considered in facility development.
Solano County	Objective 6	Plan and develop regional recreational facilities which offer opportunities for a wide variety of activities.
Solano County	Objective 6, Policy A	The County shall give development priority to recreation sites that can accommodate multiple activities that best address the identified recreational needs and take advantage of significant natural features that enhance the recreational experience.
Solano County	Objective 6, Policy B	Water development plans/land use plans for the Belden's Landing facility and any new parks such as those proposed in the vicinity of Argyll Park and the Western Railroad Museum shall be consistent with the land use compatibility criteria of the Travis Air Force Base Land Use Compatibility Plan and the noise criteria under the Health and Safety Element.
Solano County	Objective 6, Policy C	Recreational sites shall be designed and developed in a manner that enhances natural features and recreational use, and minimizes environmental impacts to the site and adjacent lands.

Agency	Document	Plan Element: (vision, goal, objective, policy, etc.)
Solano County	Objective 6, Policy D	The County shall consider the special needs of the elderly and the physically impaired in the design and development of recreational facilities.
Solano County	Objective 6, Policy G	The County shall expand existing park revenue, seek new sources of funds, and explore innovative funding arrangements for developing and maintaining county recreational facilities.
Solano County	Objective 6, Policy H	The County shall support facilities and activities that meet the needs of a culturally diverse population.
	Objective 7	Provide for the regional recreation needs of the County.
Solano County	Objective 7, Policy A	The County shall provide sites and opportunities for recreational activities that cannot be accommodated within urban areas, as funds and sites are available.
Solano County	Objective 7, Policy B	The County shall encourage development of linkages (such as riding, hiking and biking trails) between population centers and regional recreation facilities. Any trail system which links parklands cannot conflict with agriculture and other land uses.
Solano County	Objective 7, Policy C	Recreational needs of rural residents shall be considered in the design and development of rural residential subdivisions and parklands. Appropriate buffers will be provided to protect agriculture.
Solano County	Objective 7, Policy D	The County shall provide technical assistance to organizations and groups who want to develop and/or operate regional parks and recreation facilities.
Solano County	Objective 8	Accomplish all the projects included within the County Parks Capital Improvement Plan.
Solano County	Objective 8, Policy A	The County shall maintain a multi-year Parks Capital Improvement Plan and work to accomplish identified projects within the target completion dates.
Solano County	Objective 8, Policy B	The County shall ensure that capital improvements are consistent with the Master Site Plan for each park, while also accommodating upgrades that meet legal requirements and urgent remediations.
Solano County	Objective 9	Encourage the development of private recreational areas within the unincorporated area, which complement public recreation facilities within the County. This may include privately developed campgrounds, golf courses, fishing lakes, etc.
Solano County	Objective 9, Policy A	The County shall encourage privately developed recreational facilities that expand public regional recreation opportunities.
Solano County	Objective 9, Policy B	Private recreation facilities should be located and designed in a manner that minimizes adverse impacts on surrounding residential, agricultural and open space uses.
Solano County	Objective 9, Policy C	Intensive private commercial recreational developments may be confined to County urban areas if supporting public facilities and services are required.

Agency	Document	Plan Element: (vision, goal, objective, policy, etc.)
Solano County	Objective 9, Policy D	The County may provide for private concessions within County parks that do not adversely effect park resources, and provide a needed service for visitors at an affordable costs. Such concessions cannot conflict with the needs of adjacent agriculture and other land uses.
Solano County	Objective 11	Develop and maintain a marketing program to promote use of regional parks.
Solano County	Objective 10, Policy A	In cooperation with other providers of regional parks within the County, the County shall identify the use capacity of each regional park.
Solano County	Objective 10, Policy B	The County shall determine the costs and benefits associated with increasing the use of regional parks.
Solano County	Objective 10, Policy C	The County shall provide adequate support to promote regional parks use when such use can be financially self-supporting.
Solano County	Needs Summary	The discussion of existing recreation facilities in Chapter Three indicated that there are existing shortages of park areas. The County also lacks an adequate trails system and there is a need for camping and other facilities typical of regional parks. As the County population grows during the planning period, demand for trails is expected to be particularly great.
Solano County	Chapter 4 - Recreation Needs	Hiking/biking trails identified as high priority for regional needs.
SOLANO COUNTYWIDE PEDESTRIAN PLAN, SOLANO COUNTY TRANSPORTATION AUTHORITY		
Solano County Transportation Authority	1.1 About the Countywide Pedestrian Plan	Goal of Plan is to encourage and support walking as a means of transportation in Solano County, including creation and enhancement of connections that support pedestrian movement, and the creation or enhancement of places that support pedestrian travel or activity.
Solano County Transportation Authority	1.2 Pedestrian Planning Objectives	To develop an overall vision and systematic plan for accommodating pedestrians in each urban area based on general shared policies, principles, and criteria, and; to document existing conditions, and plans and projects that will implement the Plan, highlighting specific current or potential projects for each agency.
Solano County Transportation Authority	2.2 Goals, Objectives, and Policies - Overall Pedestrian Plan Goal	A complete, safe, and enjoyable system of pedestrian routes and zones in the places people need and want to go in Solano County, providing a viable alternative to use of the automobile, through connection to transit, and employment, health, commercial, recreational and social centers.
Solano County Transportation Authority	2.2 Goals, Objectives, and Policies - Objective 1, Benefit of Walking	Secure significant benefits for Solano County by preserving, creating, and enhancing pedestrian routes and places.
Solano County Transportation Authority	2.2 Goals, Objectives, and Policies - Objective 2, Safety	Ensure that safety for pedestrians, especially young people, old people, and people with disabilities, is the highest priority among competing pedestrian improvement priorities, and a high priority among overall transportation improvement priorities.

Agency	Document	Plan Element: (vision, goal, objective, policy, etc.)
Solano County Transportation Authority	2.2 Goals, Objectives, and Policies - Objective 2, Safety/Policies	2. Coordinate with schools, PTA, senior centers and associations, and facilities and groups serving people with disabilities to identify their specific needs, and opportunities to address them.
Solano County Transportation Authority	2.2 Goals, Objectives, and Policies - Objective 2, Safety/Policies	3. Identify, plan, design and implement projects that address the most critical safety needs, working closely with user groups.
Solano County Transportation Authority	2.2 Goals, Objectives, and Policies - Objective 2, Safety/Policies	4. Follow the latest standards and best practices for design of safe pedestrian facilities, starting from references provided in this Plan.
Solano County Transportation Authority	2.2 Goals, Objectives, and Policies - Objective 3, Local Plans and Actions	Formulate, use and update the Countywide Pedestrian Plan to reflect and support local agencies' plans, policies, and standards, recognizing that walking is a very local activity and each agency must determine its own needs and course of action.
Solano County Transportation Authority	2.2 Goals, Objectives, and Policies - Objective 3, Local Plans and Actions/Policies	2. Encourage the use of the Pedestrian Plan as a toolkit to help local jurisdictions identify, document, support, and implement pedestrian-friendly projects, through the digital maps, policy background, guidelines and funding information provided in the Plan.
Solano County Transportation Authority	2.2 Goals, Objectives, and Policies - Objective 3, Local Plans and Actions/Policies	3. Encourage local jurisdictions to expand on the current projects and basic framework of pedestrian routes and places in the Plan to create their own comprehensive pedestrian plans.
Solano County Transportation Authority	2.2 Goals, Objectives, and Policies - Objective 3, Local Plans and Actions/Policies	4. Recognize and support pedestrian access and activity in existing zones and destinations such as downtowns, waterfronts and historic districts.
Solano County Transportation Authority	2.2 Goals, Objectives, and Policies - Objective 3, Local Plans and Actions/Policies	5. Acknowledge and build upon the many current efforts to improve and create places within local jurisdictions that support pedestrian circulation and activity.
Solano County Transportation Authority	2.2 Goals, Objectives, and Policies - Objective 3, Local Plans and Actions/Policies	6. The highest priority pedestrian improvements should be those where pedestrian facilities are lacking or deficient in close proximity (1/4 to 1/2 mile) to pedestrian destinations such as schools, parks, transit, and shopping.
Solano County Transportation Authority	2.2 Goals, Objectives, and Policies - Objective 3, Local Plans and Actions/Policies	7. Coordinate planning for pedestrian improvements with planning for transit and regional parking centers.
Solano County Transportation Authority	2.2 Goals, Objectives, and Policies - Objective 3, Local Plans and Actions/Policies	8. Ensure that pedestrian improvements meet applicable standards for access to people with disabilities.

Agency	Document	Plan Element: (vision, goal, objective, policy, etc.)
Solano County Transportation Authority	2.2 Goals, Objectives, and Policies - Objective 3, Local Plans and Actions/Policies	9. Coordinate with local schools, from elementary to college level, to encourage and support walking, including preparation of Safe Routes to School studies, plans, programs and projects.
Solano County Transportation Authority	2.2 Goals, Objectives, and Policies - Objective 4, Public Information and Participation	Maximize public awareness and involvement in the planning of pedestrian routes and places, through the activities of STA and its member agencies.
Solano County Transportation Authority	2.2 Goals, Objectives, and Policies - Objective 4, Public Information and Participation/Policies	2. Utilize the STA's Pedestrian Advisory Committee as a resource and coordinating body for local jurisdictions' input into the Pedestrian Plan implementation and update, identifying local pedestrian issues, opportunities and projects, and to communicate information and ideas back to local agencies.
Solano County Transportation Authority	2.2 Goals, Objectives, and Policies - Objective 4, Public Information and Participation/Policies	4. Prepare and distribute or post maps of pedestrian routes and districts, and general information promoting the opportunities and benefits of walking.
Solano County Transportation Authority	2.2 Goals, Objectives, and Policies - Objective 5, Regional Planning and Coordination	Support and coordinate the planning of pedestrian connections, improvements and pedestrian-oriented development throughout Solano County.
Solano County Transportation Authority	2.2 Goals, Objectives, and Policies - Objective 5, Regional Planning and Coordination/Policies	1. Encourage the use of the Pedestrian Plan, the Pedestrian Advisory Committee, and STA staff technical assistance for guidance, resources, incentives and countywide coordination on pedestrian improvements.
Solano County Transportation Authority	2.2 Goals, Objectives, and Policies - Objective 5, Regional Planning and Coordination/Policies	2. Identify a Pedestrian Safety Coordinator in each jurisdiction – a staff member with the responsibility to support any local committee and the STA PAC member, provide interdepartmental and inter-agency coordination, and prepare or coordinate funding applications.
Solano County Transportation Authority	2.2 Goals, Objectives, and Policies - Objective 5, Regional Planning and Coordination/Policies	4. Coordinate with the County-wide Bicycle Plan and the STA Bicycle Advisory Committee on routes and projects that may be shared between pedestrians and bicycles.
Solano County Transportation Authority	2.2 Goals, Objectives, and Policies - Objective 5, Regional Planning and Coordination/Policies	5. Support the completion of regional trails that link destinations within Solano County and beyond, including the San Francisco Bay Trail and the Bay Area Ridge Trail.
Solano County Transportation Authority	2.2 Goals, Objectives, and Policies - Objective 5, Regional Planning and Coordination/Policies	7. Coordinate with the local jurisdictions to collect and organize a reference library of examples of pedestrian improvement project applications and plans, and bid and construction cost data.

Agency	Document	Plan Element: (vision, goal, objective, policy, etc.)
Solano County Transportation Authority	2.2 Goals, Objectives, and Policies - Objective 6, Funding	Maximize the amount of regional, state and federal funding for pedestrian improvements received by Solano County jurisdictions.
Solano County Transportation Authority	2.2 Goals, Objectives, and Policies - Objective 6, Funding/Policies	1. Regularly update and disseminate the information on funding sources contained in this Plan, including STA's own Countywide Transportation for Livable Communities Program, to encourage applications.
Solano County Transportation Authority	2.2 Goals, Objectives, and Policies - Objective 6, Funding/Policies	2. Develop a prioritized regional list of projects with significant pedestrian components, along with detailed cost estimates, and identify appropriate funding sources for each proposal.
Solano County Transportation Authority	2.2 Goals, Objectives, and Policies - Objective 6, Funding/Policies	3. Encourage multi-jurisdictional and multi-objective funding applications for pedestrian-supportive projects.
Solano County Transportation Authority	2.2 Goals, Objectives, and Policies - Objective 6, Funding/Policies	4. Encourage the identification or creation of reliable local, regional, and state funding sources, which can be used to leverage state or federal grant funds for pedestrian improvements.
SOLANO COUNTYWIDE BICYCLE PLAN, SOLANO COUNTY TRANSPORTATION AUTHORITY		
Solano County Transportation Authority	Goals, Objectives, and Policies - Objective 1.0	Maximize the increased use of bicycles and the development of a comprehensive regional bikeway system as a viable alternative to the automobile.
Solano County Transportation Authority	Goals, Objectives, and Policies - Policy 1.1	Develop a Countywide Bikeway Plan, which identifies existing and future needs, and provides specific recommendations for facilities and programs to be phased in over the next 25 years.
Solano County Transportation Authority	Goals, Objectives, and Policies - Policy 1.2	Update the Plan every three to five years, or as necessary to maintain eligibility for state and federal funds.
Solano County Transportation Authority	Goals, Objectives, and Policies - Policy 1.3	Ensure that the Plan is consistent with all existing regional, state, and federal bicycle documents, and is consistent with current adopted local bikeway master plans.
Solano County Transportation Authority	Goals, Objectives, and Policies - Policy 1.4	Design the Plan as a resource and coordinating body for local jurisdictions, and utilize existing and planned local bikeway facilities to the extent possible.

Agency	Document	Plan Element: (vision, goal, objective, policy, etc.)
Solano County Transportation Authority	Goals, Objectives, and Policies - Objective 2.0	Maximize the amount of state and federal funding for bikeway improvements that can be received by Solano County.
Solano County Transportation Authority	Goals, Objectives, and Policies - Policy 2.1	Identify current regional, state and federal funding programs, along with specific funding requirements and deadlines.
Solano County Transportation Authority	Goals, Objectives, and Policies - Policy 2.2	Encourage multi-jurisdictional funding applications of the countywide bikeway system.
Solano County Transportation Authority	Goals, Objectives, and Policies - Policy 2.3	Develop a prioritized list of countywide improvements along with detailed cost estimates, and identify appropriate funding sources for each proposal.
Solano County Transportation Authority	Goals, Objectives, and Policies - Policy 2.4	Encourage the formation of reliable local, regional, and state funding sources, which can be used to leverage federal funds.
Solano County Transportation Authority	Goals, Objectives, and Policies - Policy 2.5	Encourage the local jurisdictions to include bikeway improvements in their Capital Improvement Plans.
Solano County Transportation Authority	Goals, Objectives, and Policies - Objective 3.0	Build upon the existing bikeway facilities and programs in Solano County.
Solano County Transportation Authority	Goals, Objectives, and Policies - Policy 3.1	Identify existing and proposed bike paths, lanes, and routes, and design the regional system to maximize use to the extent feasible.
Solano County Transportation Authority	Goals, Objectives, and Policies - Policy 3.2	Encourage the use of existing natural and manmade corridors such as creeks, railroad rights of way, and corridors for future bike path alignments.
Solano County Transportation Authority	Goals, Objectives, and Policies - Policy 3.3	Identify existing bicycle education programs, and target future expansion as need warrants.
Solano County Transportation Authority	Goals, Objectives, and Policies - Policy 3.4	Conduct before and after bicycle counts at specific locations and times to measure the relative effectiveness of various investments. Submit all data to the STA for review and storage.

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Solano County Transportation Authority	Goals, Objectives, and Policies - Policy 3.5	Strive for the inclusion of bicycle facilities in the development of all new road, and roadway improvement projects.
Solano County Transportation Authority	Goals, Objectives, and Policies - Policy 3.6	Ensure that new roadways, transportation projects, and developments improve bicycle travel and system continuity.
Solano County Transportation Authority	Goals, Objectives, and Policies - Objective 4.0	Develop a countywide bikeway system that meets the needs of commuter and recreation bicyclists, helps reduce vehicle trips, and links residential neighborhoods with destinations countywide.
Solano County Transportation Authority	Goals, Objectives, and Policies - Policy 4.1	Develop a commuter bikeway system that provides direct routes between residential neighborhoods and regional employment areas, schools, and universities.
Solano County Transportation Authority	Goals, Objectives, and Policies - Policy 4.2	Develop a recreational bikeway system that uses lower volume streets, off-street bike paths, and serves historic and natural destinations countywide.
Solano County Transportation Authority	Goals, Objectives, and Policies - Policy 4.3	Develop a countywide bikeway system which is connected to proposed local and regional bikeway systems, and which is a maximum of two (2) miles from any residential neighborhood in Solano County.
Solano County Transportation Authority	Goals, Objectives, and Policies - Policy 4.4	Develop a bikeway network that balances the need for directness with concerns for safety and user convenience. Where needed, develop a dual system that serves both the experienced and inexperienced bicyclist.
Solano County Transportation Authority	Goals, Objectives, and Policies - Policy 4.5	Strive to develop Class II (bike lanes) and Class I (bike paths) over Class III (bike routes) wherever feasible.
Solano County Transportation Authority	Goals, Objectives, and Policies - Objective 5.0	Maximize multi-modal connections to the Bikeway System.
Solano County Transportation Authority	Goals, Objectives, and Policies - Policy 5.1	Ensure that the countywide bikeway system serves all multi-modal stations and terminals in Solano County.
Solano County Transportation Authority	Goals, Objectives, and Policies - Policy 5.2	Work with local and regional transit agencies to install bike lockers at terminals, bike racks on at least 50 percent of all buses, and bike racks and/or designated storage areas on Capitol Corridor trains and ferries serving Solano County.

Agency	Document	Plan Element: (vision, goal, objective, policy, etc.)
Solano County Transportation Authority	Goals, Objectives, and Policies - Objective 6.0	Improve bicycle safety conditions in Solano County.
Solano County Transportation Authority	Goals, Objectives, and Policies - Policy 6.1	Monitor bicycle-related accident levels annually, and target a 10 percent reduction on a per capita basis over the next 25 years.
Solano County Transportation Authority	Goals, Objectives, and Policies - Policy 6.2	Develop a comprehensive bicycle education program that is taught to all school children in Solano County.
Solano County Transportation Authority	Goals, Objectives, and Policies - Policy 6.5	Include lighting and emergency call boxes along Class I bike paths carrying high numbers of commuters as they are eligible for a variety of regional, state, and federal funding sources.
Solano County Transportation Authority	Goals, Objectives, and Policies - Objective 7.0	Develop detailed and ranked improvements in the Countywide Bicycle Plan.
Solano County Transportation Authority	Goals, Objectives, and Policies - Policy 7.1	Identify the top bikeway segments proposed to be completed in the short term (2005-2010), mid term (2010-2020), and long term (2020-2030), based on a variety of objective and subjective criteria, including number of activity centers served, closure of critical gaps, immediate safety hazards, existing bicycle use, support from the public and local jurisdictions, and availability of funding.
Solano County Transportation Authority	Goals, Objectives, and Policies - Policy 7.2	Develop detailed implementation information on each recommended segment, including length, classification, adjacent traffic volumes and speeds, activity centers served, cost, and overall feasibility.
Solano County Transportation Authority	Goals, Objectives, and Policies - Policy 7.3	Develop education and maintenance programs that may be adopted by local jurisdictions.
Solano County Transportation Authority	Goals, Objectives, and Policies - Objective 8.0	Encourage public participation and continuation of the Bicycle Advisory Committee.
Solano County Transportation Authority	Goals, Objectives, and Policies - Policy 8.1	Continue regular meeting of the Bicycle Advisory Committee. Effective committees are made up of a balance of citizens (preferably bicyclists) and department staff from planning, parks and recreation, public works, and others. BAC members should help member agencies develop local bikeway master plans and submit them for approval to local City Councils. Once approved, the BAC should be involved in monitoring implementation, funding, and other matters.

Agency	Document	Plan Element: (vision, goal, objective, policy, etc.)
Solano County Transportation Authority	Goals, Objectives, and Policies - Policy 8.2	Identify a Bicycle Coordinator in each jurisdiction who is a staff member whose responsibility is to (a) provide support to the BAC, (b) act as a liaison to the City, (c) complete funding applications, and (d) provide inter-departmental coordination.
Solano County Transportation Authority	Goals, Objectives, and Policies - Policy 8.3	Public involvement in the planning process should be maximized through workshops and other means.
Solano County Transportation Authority	Goals, Objectives, and Policies - Objective 9	Develop a coordinated marketing strategy to encourage bicycling in Solano County.
Solano County Transportation Authority	Goals, Objectives, and Policies - Policy 9.1	Develop a series of promotional/marketing incentives to encourage employees to use bicycles to reach work. Quantify the estimated future benefits of bicycling in terms of air quality, congestion, and health.
Solano County Transportation Authority	Goals, Objectives, and Policies - Policy 9.2	Encourage and expand the Solano Napa Commuter Information (SNCI) bicycle incentives program.
Solano County Transportation Authority	Goals, Objectives, and Policies - Policy 9.3	Periodically update the BikeLinks map for public distribution to reflect new bicycle facilities and information.
Solano County Transportation Authority	Goals, Objectives, and Policies - Policy 9.4	Sponsor annual bicycle events such as Bike to Work Week, the annual Solano Bicycle Classic, and adult safety courses in conjunction with other congestion management efforts.
Solano County Transportation Authority	Major Recommendations of the Countywide Bicycle Plan Update	The Countywide Bicycle Plan recommends the completion of a comprehensive bikeway network and support facilities, along with new educational and promotional programs to improve conditions for bicyclists in Solano County. The primary countywide system calls for the implementation of approximately 140 miles of bikeways connecting all of the member agencies at an estimated cost of approximately \$54 million over the 25-year life of the plan. The key primary segments identified for implementation in the short-term (next five years) include: The Solano Bikeway Extension, State Park Road Overcrossing (connecting cyclists across I-780 in Benicia to the Benicia State Recreation Area), Jepson Parkway Bikeway Phase I, Central County Bikeway.
Solano County Transportation Authority	1.8 Bicycle Safety and Education Programs - Recommended Program: Expand Education Programs	Past educational programs in Solano County schools should be expanded and supported by a secure, regular funding source. A Joint City/School District Safety Committee should be formed consisting of appointed parents, teachers, administrators, police, and public works staff whose task it is to identify problems and solutions, ensure implementation, and submit recommendations to the School Board or City Council.

Agency	Document	Plan Element: (vision, goal, objective, policy, etc.)
Solano County Transportation Authority	1.8 Bicycle Safety and Education Programs - Recommended Program: Develop New Educational Program Materials and Curriculum	Education materials should be expanded to promote the benefits of bicycling, the need for education and safety improvements, the most recent educational tools available in the county (including the use of low-cost safety videos), and directives to parents on the proper school drop-off procedure for their children. Educational pamphlets for children should be made more readable. Incentive programs to reward good behavior should be developed. Educational programs, and especially on-bike training, should be expanded to more grades and for more hours per year.
Solano County Transportation Authority	1.8 Bicycle Safety and Education Programs - Recommended Program: Develop an Adult Education Program	Establish an adult bicycle education program through the Parks and Recreation Department or other City departments that (a) teaches adults how to ride defensively, (b) how to ride on a variety of city streets, and (c) encourages adults to feel more confident to ride to work or for recreation. Work with local bicycling groups who could provide the training expertise, and possibly lead organized bicycle-training sessions, tours and rides.
Solano County Transportation Authority	4.1 Implementation Strategies - Programs and Operations	Recommendation: A Transportation Authority staff person should be assigned the role of Bikeway Coordinator, and be responsible for disseminating information, indentifying and applying funding, and assisting with multi-jurisdiction applications. Additionally, each jurisdiction should identify a similar staff person whose responsibility also includes coordination between departments; especially in the design review of new projects to ensure that bikeway design guidelines are being met for all local projects.
EAST BAY REGIONAL PARK DISTRICT MASTER PLAN		
East Bay Regional Park District	Chp. 1: The East Bay Regional Park District, Vision Statement	The East Bay Regional Parks will preserve a priceless heritage of natural and cultural resources, open space, parks, and trails for the future and will set aside park areas for enjoyment and healthful recreation for generations to come.
East Bay Regional Park District	Chp. 1: The East Bay Regional Park District, Mission Statement	The East Bay Regional Park District will achieve its vision in the following ways: Provide a diversified system of regional parklands, trails and parkland-related services that will offer outstanding opportunities for creative use of outdoor time...Participate in partnerships with public agencies, nonprofit organizations, volunteers, and the private sector to achieve mutual goals.
East Bay Regional Park District	Chp. 2: Natural and Cultural Resources - Wildlife Management	The District will manage riparian and other wetland environments and their buffer zones to preserve and enhance the natural and beneficial values of these important resources and to prevent the destruction, loss, or degradation of habitat. The District will participate in the preservation, restoration, and management of riparian and wetland areas of regional significance, and will not initiate any action that could result in a net decrease in park wetlands. The District will encourage public access to the Bay/Delta shoreline, but will control access to riparian and wetland areas, when necessary, to protect natural resources.
East Bay Regional Park District	Chp. 3: Public Access and Cultural Service - Interpretation and Recreation Services	The District will offer recreational programs and services that appeal to participants of all ages and backgrounds, in keeping with its vision and mission. The District will create and manage a comprehensive offering of recreational opportunities, tours, and outdoor skills training that will help visitors use and enjoy the parks and trails, and will collaborate with other agencies, organizations, and partners to provide a broad spectrum of regional recreational opportunities.

Agency	Document	Plan Element: (vision, goal, objective, policy, etc.)
East Bay Regional Park District	Chp. 3: Public Access and Cultural Service - Recreation Facilities and Areas	The District will expand its comprehensive trail system by providing more hiking and equestrian narrow trails and more multiple-use paved and unpaved trails. A primary objective will be to provide inter-connecting trails and to link the regional parks through a District-wide system of trails.
East Bay Regional Park District	Chp. 3: Public Access and Cultural Service - Recreation Facilities and Areas - trails	The District will expand its unpaved multi-use regional trail system as additional acreage and new parks are added. The District will continue to provide multi-use trails to link parks and to provide access to park visitor destinations.
East Bay Regional Park District	Chp. 3: Public Access and Cultural Service - Recreation Facilities and Areas - trails	The District will continue to plan for and expand the system of paved, multi-use regional trails connecting parklands and major population centers.
East Bay Regional Park District	Chp. 3: Public Access and Cultural Service - Recreation Facilities and Areas - Aquatics	The District will continue to plan, develop and provide a regional system of aquatic facilities at parks that can support these activities. The District will strive to improve public access to lakes and to the San Francisco Bay and Delta shorelines for boating and fishing, and will increase access to swimming beaches.
East Bay Regional Park District	Chp. 4: Planning and Acquisition - Planning Process and Policies	The District will continue to acquire, develop, and operate areas and facilities and to provide programs and services with the primary goal of achieving a long-term balance throughout the park system. The District will continue to allocate resources based on the populations projected for the West Metropolitan, South Metropolitan and Diablo sector. To make the most efficient use of public funds, the District will evaluate and seek support and enhance the parks, programs, and services of other agencies.
East Bay Regional Park District	Chp. 4: Planning and Acquisition - Planning Process and Policies - Open Space Protection	The District will participate in efforts to protect scenic or cultural resources, develop larger, multi-agency open space preserves, provide recreational opportunities, protect agricultural use, avoid hazards, and plan for appropriate urban growth boundaries. The District will work with other jurisdictions to develop open space preservation plans and policies that recognize the District's public interests in open space preservation and that are consistent with Board policy.
East Bay Regional Park District	Chp. 4: Planning and Acquisition - Planning Process and Policies - Liaison with Other Jurisdiction	The District will work actively with cities, counties, districts, and other governmental agencies to assure that they understand and consider District interests. The District will protect its interests when other jurisdictions plan or approved projects that affect the District and will work with them to develop and articulate mutual goals. The District will seek to understand the perspectives of other governmental agencies and to resolve conflicts in mutually satisfactory ways.
East Bay Regional Park District	Chp. 4: Planning and Acquisition - Planning Process and Policies - Liaison with Other Jurisdiction	The District will work with local governments and other agencies to develop funding agreements that offset the cost of maintaining and operating open space, parklands and trails accepted by the District.
East Bay Regional Park District	Chp. 4: Planning and Acquisition - Planning Process and Policies - Park and Trail Acquisition Criteria	The District will acquire property in accordance with the Master Plan 1997, giving careful consideration to operating and program needs, the District's financial position, timing factors that affect the sale of the property, and opportunities provided under Measure AA and any subsequent funding measures.

Agency	Document	Plan Element: (vision, goal, objective, policy, etc.)
East Bay Regional Park District	Chp. 4: Planning and Acquisition - Planning Process and Policies - Parkland Dedication in Perpetuity and Parkland Disposition	District parklands that the Board determines are appropriate for permanent commitment to park, recreational, or trail use, will be dedicated in perpetuity as provided for in state law. Non-dedicated parklands that the District determines are not necessary or appropriate for District use may be transferred to other agencies or sold, when doing so is in the best interest of the District.
East Bay Regional Park District	Chp. 4: Planning and Acquisition - Planning for Regional Parks and trails - Regional Trail	Regional trails will connect regional parks or trails to each other; to parks and trails of other agencies; or to areas of unusual scenic beauty, vista points, San Francisco Bay, Delta or lake shoreline, natural or historic resources, or similar areas of regional significance. Regional trails may also connect regional parks and trails to important destinations such as transit centers, schools, colleges, civic centers, other major institutions, employment centers, large commercial complexes, or residential areas. A regional water trail may provide a water connection with launching and landing sites for small watercraft to points along the San Francisco Bay shoreline and/or the Sacramento/San Joaquin River and Delta.
East Bay Regional Park District	Chp. 4: Planning and Acquisition - Planning for Regional Parks and trails - Regional Trail	The District encourages the creation of local trail networks that provide additional access points to the regional parklands and trails that help to provide loop trail experiences, and that connect the regional system to the community. The District will support other agencies in completing local trail networks that complement the Regional Trail system and will coordinate with local agencies to incorporate local trail connections into District brochures.
East Bay Regional Park District	Chp. 4: Planning and Acquisition - Planning for Regional Parks and trails - Regional Trail	Regional trails may be part of a national, state, or Bay Area regional trail system. The District will cooperate with other agencies and organizations to implement these multi-jurisdictional efforts.
East Bay Regional Park District	Chp. 4: Planning and Acquisition - Resource Management and Land Use Planning - Other Agency Plans	The District will coordinate with other agencies and organizations involved in planning for jointly managed facilities that extend beyond its jurisdiction.
East Bay Regional Park District	Chp. 4: Planning and Acquisition - Resource Management and Land Use Planning - Trail Plans	Where trail alignment is not predetermined by a relationship to established corridors such as roads, railroad rights-of-way, canals, utility corridors, or similar facilities, the District will prepare a study or a plan for the trail, taking into account any factors it deems relevant to alignment and feasibility. After determining a feasible trail alignment, the District will seek to acquire the necessary land tenure and develop the trail for public use. The District may acquire a wider corridor for a proposed trail to provide an enhanced environment for the trail before determining the final alignment for the trail.
East Bay Regional Park District	Chp. 4: Planning and Acquisition - Resource Management and Land Use Planning - Trail Plans	The District will coordinate with other agencies and organizations involved in planning for jointly managed regional trails or trails that extend beyond the District's jurisdiction. When applicable, the District will use planning and environmental studies done by or in cooperation with other agencies for trail planning and development.

Agency	Document	Plan Element: (vision, goal, objective, policy, etc.)
East Bay Regional Park District	Chp. 4: Planning and Acquisition - Planning and Management Guidelines	The District will strive to expand public shoreline access to a Regional Shoreline. Landing or launching spots for small boats will be incorporated when feasible. Except for facilities that must be on the shoreline or over the water surface, the District will confine all staging and recreational facilities, where possible, to uplands that are a minimum of 100 feet from the actual shoreline. Facilities such as parking that do not depend on water will be located in areas that are screened from view, when practical.
East Bay Regional Park District	Chp. 4: Planning and Acquisition - Planning and Management Guidelines	Where feasible, the District will provide multi-use opportunities on Regional trails within the same trail corridor. Bicycling and equestrian paths will be separate wherever possible, although they may share a common corridor. Regional trails should be wide enough to accommodate designated users. The use of motorized vehicles, such as motorcycles, mini-bikes, and mopeds, is prohibited on Regional trails.
East Bay Regional Park District	Chp. 4: Planning and Acquisition - Planning and Management Guidelines	The District will take appropriate measures to protect adjacent or nearby properties from Regional Trail activity and to protect trail users from activity on adjacent or nearby properties. These measures may include signage, planting, control of vegetation or pests, and assistance in providing fencing or gates. The District will consult and work cooperatively with property owners or operators, especially in agricultural areas of active cropland or range land, to identify and control or eliminate conflicts.
East Bay Regional Park District	Chp. 4: Planning and Acquisition - Planning and Management Guidelines	The District will encourage other agencies, community organizations, and businesses that can benefit from trail access to develop and operate feeder trails and connections to the Regional trails.
East Bay Regional Park District	Chp. 4: Planning and Acquisition - Planning and Management Guidelines	Recreation/Staging Units will be located at strategic access points along a Regional Trail. The District will consolidate staging facilities whenever possible with other regional parklands as well as with local parks, schools, or other facilities. The Recreation/Staging Unit for a Regional Trail will be developed with a primary focus on facilities that are adequate and appropriate for trail users. These may include parking areas for automobiles and/or horse-trailers, equestrian centers, sanitary facilities, drinking water, picnic areas, shelters, and trail head signs. A recreational/Staging Unit may also contain additional facilities that are not primarily oriented toward trail users, including play fields, fishing areas, or landscaped areas, as long as these facilities do not conflict with the primary purpose of the Recreation/Staging Unit or with conservation of the environment.
Metropolitan Transportation Commission (MTC)	Goals and Policies; Principal Goal	To ensure that bicycling is a safe, convenient, and practical means of transportation and healthy recreation throughout the Bay Area, including in Priority Development Areas (PDAs); to reduce traffic congestion and risk of climate change; and to increase opportunities for physical activity to improve public health.
Metropolitan Transportation Commission (MTC)	Goals and Policies; Goal 1.0: Routine Accommodation	Guarantee that accommodations for bicyclists and pedestrians are routinely considered in the planning and design of all roadway, transit and other transportation facilities funded by MTC.
Metropolitan Transportation Commission (MTC)	Goals and Policies; Goal 1.0 - Policy 1.1	Ensure that all transportation projects funded by MTC consider enhancement of bicycle transportation, consistent with MTC Resolution 3765, Caltrans Deputy Directive 64 R1, Assembly Concurrent Resolution 211 and the Complete Streets Act.

Agency	Document	Plan Element: (vision, goal, objective, policy, etc.)
Metropolitan Transportation Commission (MTC)	Goals and Policies; Goal 1.0 - Policy 1.2	Encourage bicycle-friendly design of all roadways, public transit systems and other transportation facilities, through new technologies, "best practices," mandatory standards, optional guidelines and innovative treatment.
Metropolitan Transportation Commission (MTC)	Goals and Policies; Goal 2.0: The Regional Bikeway Network (RBN)	Define a comprehensive Regional Bikeway Network (RBN) that connects every Bay Area community; provides connections to regional transit, major activity centers and central business districts; and includes the San Francisco Bay Area.
Metropolitan Transportation Commission (MTC)	Goals and Policies; Goal 2.0 - Policy 2.1	Develop a cohesive system of regional bikeways that provide access to and among major activity centers, public transportation and recreation facilities.
Metropolitan Transportation Commission (MTC)	Goals and Policies; Goal 2.0 - Policy 2.2	Ensure that the RBN serves bicyclists with diverse ability levels who are bicycling for a range of transportation and recreational purposes.
Metropolitan Transportation Commission (MTC)	Goals and Policies; Goal 2.0 - Policy 2.3	Ensure that closing gaps in the RBN - particularly those that occur over jurisdictional boundaries - are given high funding priority.
Metropolitan Transportation Commission (MTC)	Goals and Policies; Goal 2.0 - Policy 2.4	Ensure ongoing maintenance and monitoring efforts that support the implementation and operation of the RBN.
Metropolitan Transportation Commission (MTC)	Goals and Policies; Goal 2.0 - Policy 2.5	Encourage coordination of cross-jurisdictional bicycle way-finding signage.
Metropolitan Transportation Commission (MTC)	Goals and Policies; Goal 2.0 - Policy 2.6	Provide bicycle access across all Bay Area toll bridges and other regionally significant facilities.
Metropolitan Transportation Commission (MTC)	Goals and Policies; Goal 4.0 Bicycle Education and Promotion	Develop training sessions and educational materials that emphasizes bicycle safety and the positive benefits of cycling.
Metropolitan Transportation Commission (MTC)	Goals and Policies; Goal 4.0 - Policy 4.1	Encourage and support the creation or expansion of comprehensive safety awareness, driver education, cyclist education, and diversion training programs for cyclists and motorists.
Metropolitan Transportation Commission (MTC)	Goals and Policies; Goal 4.0 - Policy 4.2	Develop a comprehensive promotion and outreach effort - including, but not limited to, Bike-to-Work Day - that advocates for bicycling as part of a larger effort to provide healthy and environmentally friendly transportation choices.

Agency	Document	Plan Element: (vision, goal, objective, policy, etc.)
Metropolitan Transportation Commission (MTC)	Goals and Policies; Goal 4.0 - Policy 4.3	Continue to improve bicycling information and tools on the 511.org website with a focus on improving BikeMapper, the bike buddy matching tool and information for beginning bicycle commuting.
Metropolitan Transportation Commission (MTC)	Goals and Policies; Goal 4.0 - Policy 4.4	Offer training sessions on "best practices" bicycle facility design and safe cycling practices.
Metropolitan Transportation Commission (MTC)	Goals and Policies; Goal 5.0 - Multimodal Integration	Work toward developing seamless transfers between bicycling and public transportation.
Metropolitan Transportation Commission (MTC)	Goals and Policies; Goal 5.0 - Policy 5.1	Encourage transit agencies to provide, maintain and promote convenient and secure bicycle parking at transit stops, stations and terminals, including racks, bike lockers, in-station bike storage and staffed and automated bicycle parking facilities.
Metropolitan Transportation Commission (MTC)	Goals and Policies; Goal 5.0 - Policy 5.2	Ensure that bicycles are accommodated on all forms of public transit whenever possible, including on local and regional systems.
Metropolitan Transportation Commission (MTC)	Goals and Policies; Goal 5.0 - Policy 5.3	Foster collaboration between local jurisdictional and regional transit agencies to improve bicycle access to transit stations in the last mile surrounding each station. Improvements to ease, speed, convenience and safety of bicycle access, including by means of signage and bikeways, should be considered.
Metropolitan Transportation Commission (MTC)	Goals and Policies; Goal 6.0 - Comprehensive Support Facilities and Mechanisms	Encourage the development of facilities and institutions that contribute to a bicycle-friendly environment.
Metropolitan Transportation Commission (MTC)	Goals and Policies; Goal 6.0 - Policy 6.1	Encourage development of facilities at transit stations that provide long-term bicycle storage, bicycle repair and bicycle rental.
Metropolitan Transportation Commission (MTC)	Goals and Policies; Goal 6.0 - Policy 6.2	Encourage local jurisdictions to adopt ordinances requiring bicycle parking and storage and to offer incentives to employers that provide enclosed, sheltered bicycle parking for their employees and, when feasible, their customers.
Metropolitan Transportation Commission (MTC)	Goals and Policies; Goal 6.0 - Policy 6.3	Encourage local jurisdictions to provide shower and locker facilities, or to make arrangements for access to local health clubs, for all new developments and major redevelopments.
Metropolitan Transportation Commission (MTC)	Goals and Policies; Goal 6.0 - Policy 6.4	Continue to require cities and counties to form and maintain bicycle advisory committees, and to develop and update comprehensive bicycle plans, as a condition for receiving Transportation Development Act (TDA) funds.

Agency	Document	Plan Element: (vision, goal, objective, policy, etc.)
Metropolitan Transportation Commission (MTC)	Goals and Policies; Goal 7.0: Funding	Develop an equitable and effective regional funding and implementation process.
Metropolitan Transportation Commission (MTC)	Goals and Policies; Goal 7.0 - Policy 7.1	Continue to fund bicycle projects to complete the RBN.
Metropolitan Transportation Commission (MTC)	Goals and Policies; Goal 7.0 - Policy 7.2	Consider the benefits of bicycling improvements in the allocation of all transportation funding and in developing performance measures, including vehicle trip and greenhouse gas reduction, public health and community livability.
Metropolitan Transportation Commission (MTC)	Goals and Policies; Goal 7.0 - Policy 7.3	Pursue additional fund sources to continue MTC's Safe Routes to Transit program once Regional Measure 2 and Climate Action Program Funds are no longer available.
Metropolitan Transportation Commission (MTC)	Goals and Policies; Goal 7.0 - Policy 7.4	Identify new funding sources to support operation and maintenance of bicycle and pedestrian facilities, such as attended bicycle parking facilities and maintenance of multiuse paths.
Metropolitan Transportation Commission (MTC)	Goals and Policies; Goal 7.0 - Policy 7.5	Support additional funding for Safe Routes to Schools programs if federal, state and regional funds are no longer available.
Metropolitan Transportation Commission (MTC)	Goals and Policies; Goal 8.0: Planning	Continue to support ongoing regional bicycle planning.
Metropolitan Transportation Commission (MTC)	Goals and Policies; Goal 8.0 - Policy 8.1	Support ongoing planning efforts to implement projects in the Regional Bicycle Plan with the assistance of MTC Resolution 3765.
Metropolitan Transportation Commission (MTC)	Goals and Policies; Goal 8.0 - Policy 8.2	Update and adopt the Regional Bicycle Plan before the development of the next Regional Transportation Plan begins.
Metropolitan Transportation Commission (MTC)	Goals and Policies; Goal 8.0 - Policy 8.3	Encourage development of bicycle facilities and amenities when planning Priority Development Areas (PDAs).
Metropolitan Transportation Commission (MTC)	Goals and Policies; Goal 8.0 - Policy 8.4	Continue to staff and support the Regional Bicycle Working Group (which guided the development of the plan) to oversee implementation of the plan, among other efforts.

Agency	Document	Plan Element: (vision, goal, objective, policy, etc.)
Metropolitan Transportation Commission (MTC)	Goals and Policies; Goal 8.0 - Policy 8.5	Create mechanisms to distribute this plan to jurisdictions and other agencies throughout the Bay Area and encourage incorporation of applicable policies into locally adopted documents.
Metropolitan Transportation Commission (MTC)	Goals and Policies; Goal 8.0 - Policy 8.6	Continue working with the Caltrans District 4 Bicycle Advisory Committee and statewide Bicycle Advisory Committee.
Metropolitan Transportation Commission (MTC)	Goals and Policies; Goal 8.0 - Policy 8.7	Encourage jurisdictions to consider adopting California Environmental Quality Act (CEQA) standards that rigorously analyze project impacts to bicyclists and pedestrians.
Metropolitan Transportation Commission (MTC)	Goals and Policies; Goal 8.0 - Policy 8.8	Support inclusion of transportation and land-use standards in Health Impact Assessments (HIAs) which is a multidisciplinary process to examine evidence about the health effects of a development proposal.)
Metropolitan Transportation Commission (MTC)	Goals and Policies; Goal 8.0 - Policy 8.9	Work to complete the Bay Trail and other intercounty trail systems. Work to provide connections to the California Coastal Trail by coordinating with the State Coastal Conservancy, the California Coastal Commission and Caltrans to ensure a complete system of safe and efficient trails for cyclists.
Metropolitan Transportation Commission (MTC)	Goals and Policies; Goal 9.0: Data Collection	Routinely collect region wide bicycle, pedestrian trip-making and collision data, including for trips using these modes to access public transit, as part of the State of the System report and Bay Area Travel Survey (BATS) work in order to gauge progress toward the goals of the plan.
Metropolitan Transportation Commission (MTC)	Goals and Policies; Goal 9.0 - Policy 9.1	Collect Statewide Integrated Traffic Records System (SWITRS) bicycle collision statistics and data on bicycle travel in Bay Area jurisdictions, and post data on MTC's Web site.
Metropolitan Transportation Commission (MTC)	Goals and Policies; Goal 9.0 - Policy 9.3	Continue to make travel data available to the public through the MTC Web site.
Metropolitan Transportation Commission (MTC)	Goals and Policies; Goal 9.0 - Policy 9.4	Encourage local jurisdictions to work with the National Bicycle and Pedestrian Documentation Project to standardize bicycle and pedestrian data collection throughout the region.
Metropolitan Transportation Commission (MTC)	Goals and Policies; Goal 9.0 - Policy 9.5	Maintain and continue to improve MTC's existing BikeMapper service, an interactive online service that shows possible bicycle routes between any two Bay Area points.

Agency	Document	Plan Element: (vision, goal, objective, policy, etc.)
Metropolitan Transportation Commission (MTC)	Chp. 4 A Survey of Regional Bicycle Facilities - The Regional Bikeway Network (RBN)	<p>The RBN defines the San Francisco Bay Area's continuous and connected bicycling corridors of regional significance. The primary purpose of the RBN, which includes both built and unbuilt segments, is to focus regional bicycle-related funding on the highest-priority bicycle facilities that serve regional trips including access to transit.</p> <p>A set of five criteria was developed and used to select links from among those in the Bay Area's adopted countywide bicycle networks. These criteria were:</p> <ul style="list-style-type: none"> • Provide connections to every incorporated town and city and to unincorporated areas with populations of over 5,000 people, and between the Bay Area and surrounding regions. • Provide connections to the regional transit system, including multimodal terminals, ferry terminals, BART stations, commuter rail stations and Amtrak. • Provide connections to major activity centers such as universities, hospitals, parks, athletic venues and shopping malls. • Provide access within or through the major central business districts of the region. • Comprise part of the existing, planned or proposed Bay Trail system.
Metropolitan Transportation Commission (MTC)	Chp. 4 A Survey of Regional Bicycle Facilities - Table 4.1: Completion Status of Regional Bikeway Network	Plan indicates that in Contra Cost County 181 miles (or 57%) of RBN is built and 138 miles are unbuilt. In Solano County 71 miles (or 39%) of RBN is built and 110 miles are unbuilt.
Metropolitan Transportation Commission (MTC)	Chp. 4 A Survey of Regional Bicycle Facilities - Table 4.2: Regional Bikeway Network Toll Bridge Links	Plan indicates that Antioch, Benicia/Martinez and Carquinez toll bridge links are completed.
Metropolitan Transportation Commission (MTC)	Chp. 6 Next Steps - 1. Routine Accommodation	Build on MTC's Routine Accommodation policy (see Appendix C) - which impacts only projects funded by MTC - by encouraging local jurisdictions and other agencies to adopt similar policies for all transportation projects, including those that are locally funded.
Metropolitan Transportation Commission (MTC)	Chp. 6 Next Steps - 2. The Regional Bikeway Network	<ol style="list-style-type: none"> 1. Complete construction of the Regional Bikeway Network, including pathways on all Bay Area toll bridges that do not currently permit bicycle access. Allowing cyclists to cross all of the region's toll bridges will provide another travel option on crowded transbay corridors, both for current and future cyclists. 2. Update the Regional Bikeway Network between Plan updates. Although the Regional Bicycle Plan is updated between Regional Transportation Plan updates, the Regional Bikeway Network (RBN) is constantly changing. To maintain the RBN's usefulness to potential project sponsors and others tracking progress and routing, it needs to be updated at least as frequently as the Regional Transportation Plan (every four years). 3. Reassess the Regional Bikeway Network. The criteria used to identify the links in the RBN originated in 2001 during the development of the original Regional Bicycle Plan (see Chapter 4). However, priorities have changed in the intervening years, and it may be useful to reassess the criteria used to determine which links should be included in the RBN, and a corresponding analysis to ensure that the resulting network is sufficiently comprehensive.

Agency	Document	Plan Element: (vision, goal, objective, policy, etc.)
Metropolitan Transportation Commission (MTC)	Chp. 6 Next Steps - 3. Bike Safety	Help local jurisdictions improve bicycle safety. MTC could help identify resources to assist Bay Area jurisdictions and other agencies to implement the concepts presented in the Bicycle and Pedestrian Safety Toolbox (see Chapter 3).
Metropolitan Transportation Commission (MTC)	Chp. 6 Next Steps - 4. Maintenance and Operations	Identify and develop ongoing bicycle facility operations and maintenance funding. While there may be ample funds for capital projects, particularly on the Regional Bikeway Network, there is a strong need to develop sources of ongoing operations and maintenance funding.
Metropolitan Transportation Commission (MTC)	Chp. 6 Next Steps - 5. Bicycle Education and Promotion	Identify funding sources to fund bicycle education and promotion programs. These programs encourage people to bicycle for all sorts of trip purposes, teach cyclists how to ride more safely and show motorists how to drive more safely in the vicinity of bicyclists.
Metropolitan Transportation Commission (MTC)	Chp. 6 Next Steps - 6. Multimodal Integration	Broaden the transit focus of the Regional Bicycle Plan for the San Francisco Bay Area. Future Plan updates could provide detailed transit station bicycle parking inventories; identify gaps between transit stations and the bikeway network; analyze ridership and land-use data to determine where there may be latent demand for bicycle parking at transit stations; and provide bicycle parking-related policy recommendations for transit agencies, including installation guidelines and funding strategies.
Metropolitan Transportation Commission (MTC)	Chp. 6 Next Steps - 7. Comprehensive Support Facilities and Mechanism	<p>b) Encourage agencies to adopt uniform signage and electronic locker standards.</p> <p>It would be valuable to interview agencies with signs currently in place about lessons learned and whether or not there is a need for regional guidelines for bikeway signage. These discussions could evaluate the need for voluntary adoption of a uniform regional add-on to local street signs.</p>

Agency	Document	Plan Element: (vision, goal, objective, policy, etc.)
Metropolitan Transportation Commission (MTC)	Chp. 6 Next Steps - 8. Planning	<p>a) Establish benchmarks for plan goals. Goals are much more useful if progress toward them can be measured. While many of the goals in this plan are strong, MTC does not currently have a way to establish progress towards most. Examples of measurable benchmarks include construction of a certain percentage of the RBN each year; completion of a certain number of bicycle and pedestrian training courses each year; achievement of the federal government's goals to double trips made by bicycling; and achievement of the Transportation 2035 goal of reducing bicycle fatalities and injuries each by 25 percent from 2000 levels by 2035.</p> <p>b) Develop criteria for new MTC Regional Bicycle Network Program. In order to use the newly-adopted Regional Bikeway Network program to complete the Network most expeditiously and in the most logical and useful order, criteria are needed that allow funds to prioritize network gaps, high bicycle-use corridors, and locations with high rates of motor vehicle/bicycle collisions.</p> <p>c) Implement plans for access on the remaining bicycle-inaccessible toll bridges. The findings of the Project Study Report (PSR) for Bicycle and Pedestrian Access on the Richmond-San Rafael Bridge and the Feasibility Report: San Francisco-Oakland Bay Bridge West Span: Bicycle/Pedestrian/Maintenance Path Planning and Feasibility Study need to be implemented to allow bicycle access on these critical gaps in the Regional Bikeway Network.</p> <p>d) Develop model practices for considering bicycles in impact analyses. Impact fees exacted from new development are an underutilized resource for the construction of bicycle facilities. These fees are usually a direct outcome of mitigations uncovered through transportation impact analyses. However, while many agencies have criteria related to motor vehicle impacts, very few have formulated corresponding criteria for bicyclists, pedestrians or public transit. Fees needed to mitigate impacts on bicycle travel are therefore rarely imposed due to the lack of accepted mechanisms to measure these impacts under the California Environmental Quality Act (CEQA), comparable to level of service (LOS) of auto traffic.</p>
Metropolitan Transportation Commission (MTC)	Chp. 6 Next Steps - 9. Data Collection	<p>Improve collection and analysis of bicycle trip-making and collision data. In particular, it is important that MTC continues to conduct the Bay Area Travel Survey (BATS) with as large a sample as possible. In counties where more precise bicycle trip information is needed, Bay Area congestion management agencies could pay to add additional surveyed households. In addition, MTC could relatively easily collect data on frequency of bicycle use over a longer time period, say over the past week or month. MTC could also partner with local agencies, universities, public health professionals and bicycle advocates to perform bicycle counts at key locations and analyze the results. Bay Area transit operators should be encouraged to always include questions about mode of access on their onboard passenger surveys.</p>
Metropolitan Transportation Commission (MTC)	Appendix B: Built Regional Bikeway Network Links	<p>Existing Regional Bikeway Network Links identified in Plan include:</p> <p>Contra Costa County: Delta DeAnza Trail (CC-29)</p> <p>Solano County: North Vallejo to Benicia (SOL-23), Vallejo to Martinez Bridge Connection (SOL-24)</p>

Agency	Document	Plan Element: (vision, goal, objective, policy, etc.)
THE BAY TRAIL PLAN, ASSOCIATION OF BAY AREA GOVERNMENTS		
Association of Bay Area Governments	Section III: Bay Trail Recommendations - Trail Alignment Policies	Ensure a feasible, continuous trail around the Bay.
Association of Bay Area Governments	Section III: Bay Trail Recommendations - Trail Alignment Policies	Minimize impacts on and conflicts with sensitive environments.
Association of Bay Area Governments	Section III: Bay Trail Recommendations - Trail Alignment Policies	Locate trail, where feasible, close to the shoreline.
Association of Bay Area Governments	Section III: Bay Trail Recommendations - Trail Alignment Policies	Provide a wide variety of views along the Bay and recognize exceptional landscapes.
Association of Bay Area Governments	Section III: Bay Trail Recommendations - Trail Alignment Policies	Investigate water trails as an enhancement to the trail system where necessary or appropriate.
Association of Bay Area Governments	Section III: Bay Trail Recommendations - Trail Alignment Policies	In selecting a route for the trail, incorporate local agency alignments where shoreline trail routes have been approved. Incorporate San Francisco Bay Conservation Commission public access trails where they have been required.
Association of Bay Area Governments	Section III: Bay Trail Recommendations - Trail Alignment Policies	Where feasible and consistent with other policies of this plan, new trails may be routed along existing levees.
Association of Bay Area Governments	Section III: Bay Trail Recommendations - Trail Alignment Policies	Where existing trails through wetlands are well-maintained and well-managed, the Bay Trail can feasibly be routed there. In these cases, trails should be used according to current regulations. Alternate routes should be provided where necessary and additional buffering/transition are designed to protect wetland habitats should be provided where appropriate to protect wildlife.
Association of Bay Area Governments	Section III: Bay Trail Recommendations - Trail Alignment Policies	In selecting a trail alignment, use existing stream, creek, slough and river crossings where they are available. This may require bridge widenings in some locations. In selecting trail alignments, new stream, creek and slough crossings should be discouraged. Where necessary because acceptable alternatives do not exist, bridging may be considered.
Association of Bay Area Governments	Section III: Bay Trail Recommendations - Trail Alignment Policies	In order to minimize the use of existing staging areas along the shoreline and to reduce the need for additional staging areas, the choice of trail alignment should take full advantage of available transit, including rail service (e.g., Caltrain, BART), ferries and bus service.

Agency	Document	Plan Element: (vision, goal, objective, policy, etc.)
Association of Bay Area Governments	Section III: Bay Trail Recommendations - Trail Alignment Policies	Connections to other local and regional trail and bikeway systems should be actively sought in order to provide alternatives to automobile access to the Bay Trail. In particular, opportunities should be explored for trail connections to the Bay Area Ridge Trail, which is envisioned to circle the Bay along the region's ridgelines.
Association of Bay Area Governments	Section III: Bay Trail Recommendations - Trail Design Policies	Provide access wherever feasible to the greatest range of trail users on each segment.
Association of Bay Area Governments	Section III: Bay Trail Recommendations - Trail Design Policies	Wherever possible, new trails should be physically separated from streets and roadways to ensure the safety of trail users.
Association of Bay Area Governments	Section III: Bay Trail Recommendations - Trail Design Policies	Create a trail that is as wide as necessary to accommodate safely the intended use, with separate alignments, where feasible, to provide alternative experiences.
Association of Bay Area Governments	Section III: Bay Trail Recommendations - Trail Design Policies	Highlight the interpretive potential of certain trail segments, including opportunities for interpretation, education, rest and view enjoyment.
Association of Bay Area Governments	Section III: Bay Trail Recommendations - Trail Design Policies	Incorporate necessary support facilities, using existing parks, parking lots, and other staging areas wherever possible.
Association of Bay Area Governments	Section III: Bay Trail Recommendations - Trail Design Policies	Design new segments of trail to meet the highest practical standards and regulations, depending on the nature and intensity of anticipated use, terrain, existing regulations, and standards on existing portions of the trail.
Association of Bay Area Governments	Section III: Bay Trail Recommendations - Trail Design Policies	Minimum and maximum standards by use, width, surface, etc, should be developed, to ensure safe enjoyment of the trail and compatibility with surroundings and existing facilities, and to encourage use and design of surfaces for which long-term maintenance will be cost-effective.
Association of Bay Area Governments	Section III: Bay Trail Recommendations - Trail Design Policies	Design and route the trail to discourage use of undesignated trails.
Association of Bay Area Governments	Section III: Bay Trail Recommendations - Trail Design Policies	A consistent signing program should be established throughout the trail system, using a Bay Trail logo which will identify trails within the Bay Trail system as distinct from other connecting trails. The choice of materials used should be the concern of the individual implementing jurisdictions and agencies.
Association of Bay Area Governments	Section III: Bay Trail Recommendations - Trail Design Policies	The trailhead signing program may include variety of information which will enhance the Bay Trail experience. This may include a description of the length and relative difficulty of the trail as a guide for trail users with mobility limitations, available support facilities, available access to other connecting trails, and a description of the habitat resource which emphasizes interpretive information as well as the need to observe posted trail use restrictions.

Agency	Document	Plan Element: (vision, goal, objective, policy, etc.)
Association of Bay Area Governments	Section III: Bay Trail Recommendations - Environmental Protection Policies	To avoid impacts in wetlands, the Bay Trail should not require fill in wetlands, and should be designed so that use of the trail avoids adverse impacts on wetland habitat.
Association of Bay Area Governments	Section III: Bay Trail Recommendations - Environmental Protection Policies	The Bay Trail should not be defined as a continuous asphalt loop at the Bay's edge, but as a system of interconnecting trails, the nature of which will vary according to the locale and the nature of the terrain and resources in the vicinity of each particular trail segment.
Association of Bay Area Governments	Section III: Bay Trail Recommendations - Environmental Protection Policies	The path will not always follow the bay shoreline; inland reaches may be more appropriate, especially for bicycle travel, in some parts of the San Francisco Bay region.
Association of Bay Area Governments	Section III: Bay Trail Recommendations - Environmental Protection Policies	The path should be designated to accommodate different modes of travel (such as bicycling and hiking) and differing intensities of use, possibly requiring different trail alignments for each mode of travel, in order to avoid overly intensive use of sensitive areas.
Association of Bay Area Governments	Section III: Bay Trail Recommendations - Environmental Protection Policies	Where the alignment of the Bay Trail may more appropriately be located away from the shoreline in order to protect particularly sensitive habitats, access to shoreline areas may be possible by connecting the Bay Trail to existing loop trails and other interpretive facilities. These access points should be planned and designed to make clear the distinction between the continuous Bay Trail and the interpretive trail. (Features may include different trail surfaces, marked entry points to interpretive areas, expanded facilities for education and shoreline interpretation, signage, regulation and enforcement of regulations.)
Association of Bay Area Governments	Section III: Bay Trail Recommendations - Environmental Protection Policies	Provision of land or funds for Bay Trail planning or construction shall not be considered mitigation for wetland losses.
Association of Bay Area Governments	Section III: Bay Trail Recommendations - Environmental Protection Policies	Bridges and roads will be important connections in the Bay Trail system, providing not only commute routes, but enhancing the recreational use of the Trail by creating trail loops which will allow a greater number of people to enjoy the Trail.
Association of Bay Area Governments	Section III: Bay Trail Recommendations - Environmental Protection Policies	In the short term, attention should be focused on improving safe access to the bridges, possible expansion of bicycle shuttle services and public transit accommodations of bicycles to allow cross-bay access.
Association of Bay Area Governments	Section III: Bay Trail Recommendations - Environmental Protection Policies	In the long term, unconstrained access on bridge structures is preferred. This can more easily be accomplished in planning future facilities, as long as public access is a requirement for new structures. Legislative action which would require bicycle and pedestrian access on new facilities should be actively sought.

Agency	Document	Plan Element: (vision, goal, objective, policy, etc.)
Association of Bay Area Governments	Section III: Bay Trail Recommendations - Environmental Protection Policies	Opportunities for cooperative funding of pedestrian and bicycle access ways should be investigated in order to make financing feasible.
Association of Bay Area Governments	Section III: Bay Trail Recommendations - Environmental Protection Policies	Access to the trail by all forms of public transit should be strongly encouraged. Opportunities for reaching the trail by public transit should be highlighted on trail maps and promotional materials.
Association of Bay Area Governments	Section III: Bay Trail Recommendations - Implementation Policies	An ongoing Bay Trail Project should be established to implement the Bay Trail Plan. The Project should be jointly sponsored by a wide range of organizations and agencies committed to realizing the vision of the Bay Trail.
Association of Bay Area Governments	Section III: Bay Trail Recommendations - Implementation Policies	The Bay Trail Committee, technical committee and outreach program should be established as described in Section IV of the Bay Trail Plan.
Association of Bay Area Governments	Section III: Bay Trail Recommendations - Implementation Policies	"Friends of the Bay Trail" should be established to provide widespread opportunities for the active involvement of individuals and organizations throughout the Bay Area to promote the Bay Trail.
Association of Bay Area Governments	Section III: Bay Trail Recommendations - Implementation Policies	The Bay Trail Committee should continue to explore the establishment of a management authority to coordinate maintenance, patrolling and liability functions for portions of the Bay Trail.
Association of Bay Area Governments	Section III: Bay Trail Recommendations - Implementation Policies	Local government and other implementing agencies should be strongly encouraged to amend relevant planning and policy documents (general plans, specific plans, zoning ordinances) to incorporate appropriate references to the Bay Trail.
Association of Bay Area Governments	Section III: Bay Trail Recommendations - Implementation Policies	The Bay Trail recognizes the authority of managing agencies to set policy regarding the use of trails within their jurisdiction.
Association of Bay Area Governments	Section III: Bay Trail Recommendations - Implementation Policies	In constructing the trail and implementing signing programs, agencies should be encouraged to utilize non-profit organizations (e.g., the California Conservation Corps, the East Bay Conservation Corps, ...and the Trail Center).
Association of Bay Area Governments	Section III: Bay Trail Recommendations - Implementation Policies	Local agencies should be sensitive to the natural environment not only in the project planning to implement segments of the Bay Trail, but also in maintaining and managing the trail once built.
Association of Bay Area Governments	Section III: Bay Trail Recommendations - Implementation Policies	Agencies should be encouraged to take advantage of the wide variety of available trail financing and implementation techniques identified in the Bay Trail Plan as they undertake implementation of Bay Trail segments in their jurisdictions.

Agency	Document	Plan Element: (vision, goal, objective, policy, etc.)
Association of Bay Area Governments	Section III: Bay Trail Recommendations - Implementation Policies	The Bay Trail Committee should assist local agencies in identifying and securing funding for Bay Trail Implementation.
Association of Bay Area Governments	Section III: Bay Trail Recommendations - Providing Connections to Existing Park and Recreational Facilities	As the connecting feature of a system of shoreline open spaces, the Bay Trail will create connections between more than 90 parks and publicly-accessible open space areas around San Francisco Bay, representing trail connections from Bay Trail spine and spur segments to more than 57,000 acres of publicly-accessible open space throughout the San Francisco Bay Area. Connector trails provide access to an additional 7,000 acres of recreation and open space.
Association of Bay Area Governments	Section III: Bay Trail Recommendations - Providing Connections to Existing Park and Recreational Facilities	By establishing trail connections to "water trails" -- commercial ferries, public boat launches and fishing piers - - The Bay Trail will multiply the recreational benefits associated with the trail.
Association of Bay Area Governments	Section III: Bay Trail Recommendations - Providing Links to Existing and Proposed Transportation Facilities	The importance of incorporating transit facilities into the trail system will become more apparent as staging areas (primarily parking facilities) for shoreline creation facilities become more and more crowded. Creating convenient alternatives for reaching shoreline trails and recreation areas will reduce the burden on existing facilities and will suppress the need to build costly new ones. Another long-term benefit may be the new populations are introduced to local transit service, furthering regional efforts to encourage public transit as a commute alternative.
Association of Bay Area Governments	Section III: Bay Trail Recommendations - Providing Links to Existing and Proposed Transportation Facilities	The trail alignment has been designed to utilize existing and planned local bikeway systems...The Bay Trail alignment has, where possible, incorporated these local systems (Class II and III bikeways) into on-street segments of the Trail. Where this was not possible, the alignment attempts to provide connections to local bicycle facilities, creating a bikeway grid that will be useful for recreational and commute cyclists.
Association of Bay Area Governments	Section IV: A Framework for Implementation - Providing Links to Existing and Proposed Transportation Facilities	Existing non-profit organizations, as well as public and private agencies, must be encouraged to take an active role in implementing the Trail, and should be encouraged to suggest ways in which they would like to become involved. Local, regional and national promotion of the Trail must be pursued to generate support, encourage local volunteerism and enhance funding opportunities....Local agencies must be apprised of Bay Trail funding opportunities. Cooperative funding should be pursued, possibly with the aid of a grant-writing revolving fund to support preparation of joint grant applications for high-priority segments of the Trail.

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Appendix C. Technical Issues Analysis

This appendix presents the Technical Issues Analysis for the Delta Trail.

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1. Introduction

This memorandum is one of the planning products for the Great California Delta Trail Blueprint Report for Contra Costa and Solano Counties. The project is funded through grants from the California Coastal Conservancy and Contra Costa County.

As with any large-scale, multi-jurisdictional project, planning a trail network through the Sacramento-San Joaquin Delta (Delta) region will entail addressing many engineering, environmental and planning issues. A key part of the Great California Delta Trail Blueprint planning process is identifying and discussing these issues, with the Technical Advisory Committee (TAC) and the Stakeholder Advisory Committee (SAC) and to find conceptual solutions through research by the consultants, and input from the TAC and SAC.

This memorandum summarizes potential technical issues in planning the Great California Delta Trail (Delta Trail) including:

1. Public Safety and Liability
2. Private Property Impacts and Liability
3. Property Access
4. Agricultural Resources
5. Levee Integrity and Maintenance
6. Water Quality
7. Environmental Resources
8. Funding
9. Trail Design



2. Public Safety and Liability

2.1 Challenges

Public safety and liability are two of the most common challenges to implementing a trail system. A number of pertinent challenges were raised at the Delta Trail TAC and SAC meetings, including concerns about user injuries on the trail and off the trail (if users were to enter adjacent private property and sustain an injury).

Specific concerns include:

Adequate Operation and Maintenance, and Emergency Response. Well-maintained trails minimize user safety issues. The trail will require maintenance to address deterioration due to weather or general use. The trail will require patrol and maintenance to prevent and address potential problems such as damage to signs, litter, and graffiti; travel at unsafe speeds; mismanaged pets; or unauthorized motor vehicles on the trail. Maintenance and management activities will require staff, equipment, and the associated funding. Timely provision of medical, police, and fire response services may be difficult in remote areas or along narrow trail segments. Trail improvements or use may interfere with emergency repair or maintenance activities on levees.

Liability. Public entities and private non-profit landowners may incur liability if they become owning or managing entities for the trail and trail user injuries occur.

Related challenges are addressed under Private Property Impacts and Liability, Property Access, and Agricultural Resources sections of this Memorandum.

The best practice to minimize potential legal actions is to manage the Great California Delta Trail in a coordinated program that identifies safety issues and addresses them efficiently.

2.2 Potential Solutions

All public facilities require a careful effort to maximize public safety and minimize exposure to liability. The best practice to minimize potential legal actions is to manage the Delta Trail in a coordinated program that identifies safety issues and acts to remedy them efficiently. For the Delta Trail, this includes high-quality design, operation and maintenance. It also includes public entity and private landowner liability protection provided by existing laws, statutes, policies and insurance.

This section addresses operation and maintenance, laws and statutes and insurance strategies to maximizing public safety and protecting trail managers and adjoining landowners. Trail design is discussed in the Trail Design section.

Operation and Maintenance

A policy and practice for trail maintenance and use management is perhaps the best defense a trail manager has to protect public safety and guard against undue injury-related lawsuits. It is anticipated that local government entities will be responsible for operation and maintenance of the Delta Trail segment(s) within their jurisdiction. Most agencies depend on a combination of staff, volunteers, local

law enforcement, partnering entities and/or landowners to identify and address operations and maintenance issues.

Strategies

Prevention of unsafe conditions is the best approach to maintaining public safety. Implementation of a user education program and responsive maintenance and management will be paramount in creating safe trail conditions. Posting trail rules and the reasoning behind them is an effective way to reinforce safe behavior. Peer pressure to abide by the rules is key to successful trail operation and maintenance.

Possible operation and maintenance strategies to improve public safety and mitigate liability include:

- Implementation of a Safety Program. The Delta Trail management agencies should implement a safety program that includes systematic risk management assessment, inter-agency design review for all proposed improvements, and coordinated accident and crime reporting and response. In addition to department managers, planners, designers and engineers, police, sheriff and fire/rescue and field maintenance personnel should be consulted in the design and review process.
- Implementation of an Emergency Response Protocol. The management agencies should implement an emergency response protocol working with law enforcement, EMS agencies, and fire and rescue departments that includes mapping of trail and open space access points, design of trails and access roads (to accommodate loads up to 6.5 tons), an “address system” such as mile markers to identify locations and, where appropriate, 911 emergency phones in remote areas.
- Provision of adequate operation, maintenance and emergency response is essential to minimize user safety issues. The trail will require maintenance to address deterioration due to weather or general use. Patrol and maintenance will be required to prevent and address potential problems such as damage to signs, litter, and graffiti; travel at unsafe speeds; mismanaged pets; or unauthorized motor vehicles on the trail. Maintenance and management activities will require staff, equipment, and the associated funding. Each trail segment or project should have a specific operation and maintenance plan that identifies tasks, responsible parties, sources of funding and support.
- Entities responsible for trail construction should fund or endow operations and maintenance activities in conjunction with implementation of any specific trail plan.
- Implementation of a Management System Data Base. The management agencies should implement a data base management system in cooperation with law enforcement agencies for



De Anza Trail in Bay Point

tracking specific locations and circumstances of all crashes, crime incidents and safety reports, and create a safety follow-up taskforce to address any problems that develop.

- **Implementation of a User Education Program.** The management agencies should implement a user education program reaching out to key user groups, such as communities, groups and clubs, to teach safe trail behavior and conflict prevention.
- **Conducting Routine Trail Inspections.** The management agencies should routinely inspect for safety hazards, defective structures, missing safety signs, etc. A key part of this oversight is maintaining contacts with neighboring property owners, residents and businesses, and being responsive to their concerns. A properly trained and coordinated volunteer trail patrol/docent staff is used by many regional and local trail agencies to supplement the work of limited paid staff on inspections and routine contacts.
- **Posting and Enforcing Safe Trail Behavior.** The management agencies should post and enforce safe user behavior and pathway speed limits (in congested and high risk areas). Again, trained and coordinated volunteers can be key to success in providing information and enforcement.
- **Trail Maintenance and Vegetation Management.** The management agencies should trim trees, bushes, tall grasses, etc. to address clearance, fire safety and sight distance issues. Control of litter and maintenance of the trail surface, signs, fences and gates are regularly required.

Laws and Statutes

Protections Provided to Private Landowners

According to ordinary principles of negligence law, landowners are, in general, liable for injuries sustained by others on their property (Cal. Civ. Code § 1714 (a)). However, the public statutes listed below provide broad protection to private landowners who allow the public to use their land for recreational purposes:

California Recreational Use Statute (California RUS) (Cal.Civ.Code § 846)

California Recreational Trails Act (Cal.Pub.Res.Code § 5070 et seq.)

Table C-1 provides a summary of the legal protections relevant to recreational trails available public entities, private landowners and adjacent landowners.

Table C-1: Legal Protections Associated with Trails

Type of Protection	Entity Protected		
	Public Entity	Private Landowner of property containing a trail segment	Adjacent Landowner to property containing a trail segment
Tort Claims Act	Yes	No	No
California Recreational Use Statute	Some ¹	Yes	No
California Recreational Trails Act	No	Yes	Yes
Insurance	Yes	Yes	Yes
¹ Cal. Civ. Code § 846.1 allows a public entity to present a claim for reasonable attorney's fees in certain circumstances.			

California Recreational Use Statute

The California RUS provide protects private landowners who allow the public to use their land for recreational purposes (provided they do not charge a fee). A person injured on land made available to the public for recreational use must prove that the landowner deliberately intended to harm him or her. RUSs are intended to limit landowners' liability to encourage them to make their land available for public recreation.

As specified in the California RUS, a recreational purpose includes such activities as fishing, hunting, camping, water sports, hiking, spelunking, sport parachuting, riding, including animal riding, snowmobiling, and all other types of vehicular riding, rock collecting, sightseeing, picnicking, nature study, nature contacting, recreational gardening, gleanng, hang gliding, winter sports and viewing or enjoying historical, archaeological, scenic, natural or scientific sites. For statutory protection to apply, the injured party must have entered the land for recreational purposes. If the party who was injured entered the land for purposes other than recreational, the statute's protection will not apply.

There are three circumstances for which the California RUS does not apply. Statutory immunity will not apply if the landowner commits a willful or malicious failure to warn or guard against dangerous condition, charges a fee to use their property or extends an express invitation to the injured party to use their property. As long as landowners do not engage in any of these three circumstances, they may be confident they will not be held responsible for an injury sustained by others on their property who entered for a recreational purpose.

In addition to placing limits on liability, the California RUS allows landowners or others with an interest in real property to present a claim for reasonable attorney's fees (within limits) in certain circumstances. Landowners who have given permission to the public to enter their land pursuant to an agreement with a public or nonprofit agency for purposes of recreational trail use may present a claim for reasonable attorney's fees when a civil action is brought against them by a person who alleges to have sustained an injury or property damage while on their land (Cal. Civ. Code § 846.1).

California Recreational Trails Act

The 1974 California Recreation Trails Act aimed to "encourage hiking, horseback riding, and bicycling as important contributions to the health and welfare of the state's population" (Cal. Pub. Res. Code § 5070.5). The State has recognized 26 different trail corridors as part of the Recreational Trail Act, including several trail corridors that passes through the Sacramento-San Joaquin Delta as shown in **Table C-2**.

Table C-2: California Trail Corridors with the Sacramento-San Joaquin Delta

County	California Recreational Trail Corridor
Contra Costa	American Discovery Trail, Mokelumne Coast to Crest Trail, Bay Area Ridge Trail, San Francisco Bay Trail
Sacramento	American Discovery Trail, San Francisco Bay Trail
San Joaquin	American Discovery Trail, Mokelumne Coast to Crest Trail,
Solano	Bay Area Ridge Trail
Yolo	American Discovery Trail

The Recreation Trails Act provides liability protection for landowners adjacent to trails designated as part of the California Recreation Trail system as follows:

“No adjoining property owner is liable for any actions of any type resulting from, or caused by, trail users trespassing on adjoining property, and no adjoining property owner is liable for any actions of any type started on, or taking place within, the boundaries of the trail arising out of the activities of other parties” (Cal. Pub. Res. Code §5075.4).

Protections Provided to Public Entities

In California, the following laws and statutes apply to public entities:

- California Tort Claims Act (Cal.Gov’t Code §810-996.6 et seq.)
- California Recreational Use Statute (RUS) (Cal.Civ.Code §846.1)

California Tort Claims Act

California’s Tort Claims Act provides public entities and their employees broad immunity from lawsuits similar to the protections provided by the California RUS. The Tort Claims Act provides that public entities cannot be sued under common law or generally applicable principles of tort law or negligence (e.g., Cal. Civ. Code §1714). In order for a public entity to be held liable for an injury, the injury must have been caused by a dangerous condition of their property (Gov. Code §835). A dangerous condition is defined as “a condition of property that creates substantial (as distinguished from minor, trivial or insignificant) risk of injury when such property or adjacent property is used with due care in a manner in which it is reasonably foreseeable that it will be used” (Gov. Code §830).

The California Tort Claims Act protects public entities, public employees and persons granting a public easement to a public entity from liability for an injury caused by a minor hazard associated with the condition of a trail (paved or unpaved) and some unpaved roads. The trail or unpaved road must be used for access to recreational or scenic areas, fishing, hunting, camping, hiking, riding (including animal and all types of vehicular riding) and water sports. In order for this statute to apply, the public entity must “reasonably attempt to provide adequate warnings” of the existence of any condition along a paved trail that constitutes a hazard to health or safety (Gov. Code §831.4). Warnings are not required along unpaved trails or roads.

The California Tort Claims Act includes specific protections for hazardous recreational activities (Gov. Code §831.7). The Act states that public entities and public employees are generally not liable to any person who participates in a hazardous recreational activity conducted on their property. As defined by the Act, hazardous recreational activities include animal riding, boating, biking on unpaved surfaces, windsurfing and water contact activities under certain conditions. In order for the statute to limit liability, public entities or their employees must guard or warn of known dangerous conditions and properly construct and maintain facilities. Liability is not limited if the public entity is paid a specific fee (that is, fees other than general park admission fees, vehicle entry or parking fees or group use permit fees) for granting permission to engage in a hazardous recreation activity on their land.

California Recreational Use Statute

The California RUS provides limited liability protection for public entities. Under California RUS, a public entity can present a claim for reasonable attorney's fees in certain circumstances. In order to receive reimbursement for attorney's fees incurred in a civil action, one of the following must occur: the court must dismiss the civil action, the plaintiff must dismiss the civil action without any payment from the public entity or the public entity must prevail in the civil action (Cal. Civ. Code §846.1). The California Tort Claims Act provides additional liability protections for public entities managing recreational trails.

Insurance

Though existing laws and statutes may protect against a successful lawsuit, these safeguards do not prohibit a liability suit from being filed. For this reason, private landowners and public entities should maintain some level of general liability insurance that can be used for defending against such suits.

The person or entity responsible for maintaining the trail is most vulnerable to a lawsuit should an injury occur. Most trails are owned and operated by a public entity. In such cases, the responsible entity most often is self-insured and, thereby, covered by an umbrella insurance policy that protects all municipal activities and facilities. Other trails are owned by non-governmental organizations. In this case, the organization should purchase a comprehensive liability insurance policy. In addition to liability insurance, non-governmental organization may wish to carry workman's compensation insurance if they have any employees and insurance to protect any equipment the group may own from vandalism, theft, or fire.

New trails generally do not add significant cost to liability insurance since trail-related policies are generally written based on land area, and trails are long, narrow corridors that do not account for significant acreage when compared to larger public lands and facilities. Trail management entities should purchase or provide comprehensive liability insurance in an amount sufficient to cover foreseeable liability costs and defense claims.

3. Private Property Impacts and Liability

3.1 Challenges

Impacts to private property and the potential for private landowners to incur liability present challenges to implementing the Delta Trail. A number of challenges were mentioned at the Delta Trail TAC and SAC meetings, including the potential for trespass, vandalism and property damage. Several landowners voiced concerns about the potential to incur liability if a trail user is injured as a result of activities occurring on their lands. Private property and liability challenges associated with trails include:

- **Liability.** Trail users might be injured by activities undertaken by the landowner (e.g., accidental exposure to agricultural spraying or pesticide use), or other activities permitted on private property (e.g., hunting activities) near the trail.
- **Trespassing.** Trail users may trespass on adjoining private property and sustain injuries or loss of property. The trail users might not be considered trespassers if the landowner invites and permits trail use within a portion of their property. Furthermore, if that were the case, there is the concern that the landowner might therefore incur a higher legal duty of care to trail users than they would otherwise owe to persons trespassing on their land. Incidents of trespassing might occur with greater frequency due to the proximity of the trail.
- **Loss of Privacy.** Trail implementation may result in loss of privacy for adjacent landowners.
- **Property Security.** Introduction of a trail may result in theft of private property and/or equipment or contamination of crops. Persons using the trail may disposal of toxic materials and/or animal wastes near water bodies or agricultural areas.
- **Vandalism.** Vandalism concerns include digging and disturbance of rip-rap along levees and destruction of nearby property such as pumps and farm equipment.

While landowners have a duty to exercise reasonable care on their premises to avoid unreasonable risk or harm to others on adjacent properties, State-enacted Recreational Use Statutes potentially offset some or all of a local jurisdiction's or landowner's increased liability associated with a trail.

Related challenges are addressed under the Public Safety and Liability, Property Access, and Agricultural Resources sections of this Appendix.

3.2 Potential Solutions

While concerns about liability are understandable, studies show that neither public nor private landowners have experienced significant liability losses from trail development. Rails-to-Trails Conservancy surveyed management agencies overseeing 372 trails throughout the United States for their 1998 report titled "Rail-Trails and Safe Communities." This effort documents the level of crime on trails and identifies mitigation measures used by trail designers and managers to minimize the potential for crime. More specifically, the objectives of the study were to: 1) document the levels of crime on urban,

suburban and rural trail-trails with current statistics and comprehensive data, 2) examine trail management strategies that can mitigate crime and improve trail safety, and 3) put crime on trails in perspective. The results from the study indicate that rail-trails are safe places and that liability issues were non-existent. Correspondence from law enforcement agencies consistently reported that rail-trails do not encourage crime. To the contrary, many agencies found that heavy trail usage is a crime deterrent in areas that were isolated prior to implementation of the trail. The study also found that trail managers often utilize design and maintenance strategies to reduce the potential for crime¹. Several other studies of trail impacts on neighborhood quality and crime conclude that trails have a negligible effect on crime (the most common infringements include illegal motorized use of the trail, litter and unleashed pets) and that neighbors to the trail are either satisfied or neutral on this issue once the trail is in operation².

For the Delta Trail, private landowner liability protection provided by laws and statutes and transference of ownership are potential solutions. Private landowners who grant a public easement to a public entity for a trail or whose property is located adjacent to a public trail are not at risk as long as they abstain from “willful and wanton misconduct” against trespassers, such as recklessly or intentionally creating a hazard. As an alternative to a trail easement, a private landowner may wish to transfer ownership of the property containing the public trail to a public entity. As sovereign entities, local governments are protected by additional limitations or liability for injuries occurring on government-owned property.

This section discusses laws and statutes available to private landowners. Trail planning, design, operation and maintenance are important factors in mitigating liability and have been shown to prevent public safety and loss of property impacts including trespass and vandalism. Planning, design and operations and maintenance strategies are discussed in the Trail Design and Public Safety and Liability sections of this appendix.

Operation and Maintenance

Trail operation, maintenance and promoting responsible usage are techniques available to trail managers to protect private property and guard against trespass, vandalism and lawsuits. The Public Safety and Liability section of this Memorandum identifies operations and maintenance strategies for the Delta Trail that are known to minimize problems.

Laws and Statutes

In California, the following laws and statutes are available to private landowners under certain circumstance:

- California Recreational Use Statute (RUS) (Cal.Civ.Code § 846.1)
- California Recreational Trails Act (Cal.Pub.Res.Code § 5070 et seq.)

California Recreational Use Statute

¹ Rails-to-Trails Conservancy. (1998). Rail-Trails and Safe Communities: The Experience of 372 Trails.

² American Trails. (2000). Trail Effects on Neighborhoods: Home Value, Safety, Quality of Life. Eling, Tim. (2006). Crime, Property Values, Trail Opposition & Liability Issues. Murphy, Michelle Miller. (1992). The Impact of the Brush Creek Trail on Property Values and Crime; Santa Rosa, CA.

The California RUS is intended to limit landowners' liability to encourage them to make their land available for public recreation. While landowners have a duty to exercise reasonable care on their premises to avoid unreasonable risk or harm to others on adjacent properties, California's RUS potentially offsets some or all of a private landowner's increased liability associated with a trail.

As stated in the Public Safety and Liability section of this Memorandum, there are three circumstances for which the California RUS does not apply: the landowner must not 1) commit a willful or malicious failure to warn or guard against dangerous condition, 2) charge a fee to use their property or 3) extend an express invitation to the injured party to use their property. As long as landowners do not engage in any of these three circumstances, they may be confident they will not be held responsible for an injury sustained by others on their property who entered for a recreational purpose.



California Recreational Trails Act

The 1974 California Recreation Trails Act provides liability protection for landowners adjacent to trails designated as part of the California Recreation Trail system. The California Recreation Trail system consists of 26 different trail corridors, including the Mokelumne Coast to Crest Trail Corridor that passes through the Delta. As discussed in the Public Safety and Liability section of this Memorandum, landowners adjoining a California Recreation Trail are not liable for any actions of any type resulting from, or caused by, trail users within the trail corridor or trespassing on adjoining property.

Private Property Security and Loss of Privacy

It is likely that parts of the Delta Trail will be located near to private properties, or even on them, with permission. Neighbor concerns associated with siting a trail near their properties typically include privacy, security, and liability. Alignment of the trail along existing farm roads, levees or abutting productive farmland will require negotiation with landowners, in addition to addressing issues of privacy, safety, security and liability related to the location of the trail. Given the sensitivity of this issue, alternative alignments that are not on private property should be developed when feasible for every segment. Where easements on private property are necessary, methods for addressing those concerns will be required. Careful siting of the trail with buffer zones, supplemented by existing or planned vegetation, combined with adequate fencing and signage, and a program for public information, maintenance and management will protect the privacy and security of the land owners.

Criminal activity is not likely to occur along a path that is well planned, designed, operated, maintained and used. Careful siting of the trail combined with adequate fencing and 'No Trespassing' signs would help protect the privacy and security of nearby landowners. While crime or vandalism have not proven to be a common problem along most multi-use paths, fencing is still considered a prudent feature, especially in residential areas. The type, height and maintenance responsibility of the fencing will be dependent on local policies. Additional measures, such as patrols and proper trail maintenance, discussed under the Operations and Maintenance section of this Memorandum can address issues of privacy and security as well. Section 4.1 Public Safety and Liability identifies operations and maintenance strategies for the Delta Trail that are known to minimize problems.

4. Property Access and Land Use Conflicts

4.1 Challenges

A significant challenge to trail planning and implementation is obtaining land or permission to use land to build the trail, as much of the Delta region is privately owned. Obtaining funding for property purchase is a typical challenge to trail planning. The Delta Protection Commission (DPC) does not support the use of eminent domain; and would work through local agencies and organization project partners using willing-seller options to gain property access.

Another challenge to property access is land use or activity conflict. Some land uses, such as heavy industrial, or endangered species habitat, may not be appropriate for trail location. The Delta is also home to hunting activities that would conflict with general trail access. For example, duck clubs hunt on private land and individuals can hunt on from duck boats or camouflaged crafts.³ Hunting can occur on private or public land and the waterfowl hunting season in the Delta runs from October through January.

Lead agencies seeking to implement a trail on another property owners land typically have four options in gaining control of the portion of the property needed for the trail:

1. *Fee Purchase*
2. *Easement*
3. *License*
4. *Memorandum of Understanding*

4.2 Potential Solutions

There are a number of ways access to property can be achieved for the Delta Trail including use of public right-of-way, use of public lands or utility corridors, inclusion of trails in development projects and access to private property.

Public Right-of-Way

The public right-of-way (ROW) refers to corridors containing public streets and sidewalks. Many bikeways and pedestrian facilities are constructed in the public ROW. This option can be less expensive and more easily accomplished than those discussed below because the land is usually already part of the transportation network. In many cases, local bicycle plans include existing and proposed facilities in the public ROW that can be used as part of the Delta Trail network.

Public Lands

Use of public lands and utility corridors is another potential solution to gaining property access. Public parks and marinas are ideal locations for trails if there is sufficient access and connections. Park agencies and cities should be included in the trail alignment discussions at the start of trail planning to develop an understanding of the feasibility of access. Other potential corridors include utility corridors, railroad rights-of-way and levees.

³ <http://www.californiadelta.org/birding.htm>

Private Lands

Lead agencies seeking to implement a trail on private land or another agency's land have several options to gain access to the portion of the property needed for the trail. These options include trail dedications, fee purchase, easement, license, memoranda of understanding, bargain sale and donation. They offer a range of conditions for control of the land and assumed liability.

Trail Dedications

Inclusion of trails as part of conditions for development projects is another potential option. Many development projects are compatible with trails and would benefit from a trail in their project. The counties and cities typically have adopted bicycle and pedestrian circulation plans, and often local and regional trail plans. In the case of Contra Costa County this includes the facilities and planned facilities of the East Bay Regional Park District. Local agencies may consider identifying additional opportunities for creating trails in conjunction with proposed development projects based on local plans. The Delta Protection Commission intends to work with local agencies to identify and pursue trail connections that are part of adopted plans.

Fee Purchase

Public agencies may purchase a parcel of land (fee title) for a trail. Fee purchase of the land gives the buyer clear title to the property. It provides the simplest, and sometimes the most feasible approach toward acquiring access to land. Trail and greenway lands are often marginally developable and unsuitable for most development activity. The liability of these lands from a real estate tax perspective creates an opportunity for some developers to reduce their tax burden by selling or deeding the property to an agency for a trail.

Some agencies or nonprofits, particularly land trusts, will purchase a parcel of land to retain conservation and trail easement, and then sell it to provide parties for compatible uses – usually agriculture.

Easement



*Roseville's Dry Creek Parkway
Access with Easement*

Easements provide the general public with the right to use a specific parcel of property, usually through a defined corridor. Easements come in variety of forms that all involve the landowner's willingness to forego the use of a portion of their property and/or development rights for an agreed upon timeframe. Under most circumstances, landowners relinquish liability and management of that portion of the property and the public agency purchases the right to construct and maintain the trail on the property or a portion of the property. Easements are a more affordable option than fee purchase.

They typically “run with the land,” meaning the easement stands regardless of a change in ownership.

As part of a development permitting process, an agency may require developers to dedicate an easement for recreational trails and parks. Dedications may be included as conditions of approval of the development.

Bargain Sale

A property owner may sell property or an easement at a price less than the appraised fair market value of the land or easement. Sometimes the seller can derive the same benefits as if the property were donated. Bargain sales are attractive to sellers when the seller wants cash for the property, the seller paid a low cash price and thus is not liable for high capital gains tax, and/or the seller has fairly high current income and could benefit from a donation of the property as an income tax deduction. The lost capital gain, which is the appraised value less the sales price, is taken as a tax deduction.

License

A license is usually a fixed-term agreement that provides limited rights to the licensee for use of the property. Typically, these are employed in situations when the property cannot be sold (e.g. a publicly-owned, active electrical utility corridor), or the owner wants to retain use of and everyday control over the property. The trail management authority obtains permission to build and operate a trail. But it will have little control over the property, and may be subject to some stringent requirements that complicate trail development and operation. As with easement agreements, property owners would want a license agreement to address issues on their side. Through cooperative negotiation issues such as access for maintenance, trail management, and future improvements or modifications of the trail can be addressed.

Memoranda of Understanding

Memoranda of Understanding (MOU) are agreements between multiple entities to delegate trail management and/or maintenance duties. MOUs are legally binding on the agreeing entities to carry out their duties in good faith. Entities involved in these agreements may include public, private, non-profit or any other interested party. One such example is a public utilities commission entering into a MOU with a local jurisdiction to develop a trail along the utility corridor as was done by the San Francisco Public Utilities Commission and the County of San Mateo.

Donation

Donations typically include full transfer of property to an agency or non-profit for a specific use or purpose that may be simple or complicated by extensive conditions. Financial incentives in the form of tax credits are available in most cases. The receiving entity agrees to receive title to a parcel of land or easement at virtually no cost. In most cases, the donor is eligible to receive federal and state deductions on personal income, as describe under bargain sales. In addition, property owners may be able to avoid inheritance taxes, capital gains taxes, and recurring property taxes.

Land Use Conflicts

General

Careful land use study is critical as part of trail alignment studies to identify conflict areas and potentially address conflicts through design or operation. An early step should be contact and coordination with the local and regional planning agencies, owning and managing agencies, and agencies with regulatory oversight of highway and rail transportation facilities, utilities, and wildlife habitat.

Hunting

Some hunting locations are private and fixed, and inaccessible to the public in any case. Other hunting activities are seasonal and may occur on public or private land by permission. Careful trail location study is important to avoid hunting areas. Mitigation measures can include trail closure and warning signage. Trail heads and trails should have signs posted warning users when it is hunting season. Trail managers should consider closing the trails during hunting activities.

5. Agricultural Resources

5.1 Challenges

A primary concern raised in relation to the Delta Trail is its potential impact on agriculture. The DPC is committed to ensuring the trail will reflect the needs of all stakeholders and it will be imperative that the trail is planned and designed to minimize negative impacts to agriculture. Issues raised during the TAC and SAC discussions include:

- Impact on farm operations
- Theft or vandalism
- Loss of farm land
- Liability: spraying and trespassing
- Spread of invasive species

Trails and agriculture can coexist, but this requires an understanding of farming operations and methods to reduce or mitigate impacts.

Trails and agriculture can coexist, as demonstrated throughout Europe and in many parts of the United States, but this requires an understanding of farming operations and methods to reduce or mitigate impacts, and actions to address and ally the specific concerns of farmers.

5.2 Potential Solutions

Part of the mission of the DPC is to protect agriculture and ensure orderly, balanced conversation and development of the Delta. The Delta Trail can fulfill that mission with respect to agriculture in numerous ways. The potential exists for trail users to become supporters of local agriculture. The trail may provide the opportunity to market the Delta agricultural products to trail users as they ride past fertile fields and orchards.

The alignment of a trail at the edge of productive agricultural land can result in several desirable outcomes. First, the trail or open space provides a buffer between the agricultural operation and more densely populated residential areas. This buffer can help to reduce edge conflicts by ensuring residential subdivisions and productive agricultural lands do not share a common fence line. Secondly, the presence of the trail along agricultural acreage provides educational opportunities for non-farming residents who may otherwise have limited exposure to agricultural operations. This exposure to agricultural production may facilitate community and political support for agricultural land preservation initiatives, as residents realize the important role agriculture plays in their lives and in the life of their community. Finally, the construction of a trail abutting agricultural land presents opportunities for the landowner to reap an economic benefit if they decide to donate or sell and or an easement to a public agency or non-profit organization. As efforts to determine the preferred alignment for the Delta Trail continue, opportunities for discussion for possible profits to landowners from the sale of land, easements or from preferential taxation may arise.

Impact on Farm Operations

Trail location, design, operation and management can encourage safe and considerate trail use practices and provide a diminished risk of injury, reducing the risk of liability claims. Some of the most significant



Farm Stand in Knightsen

features of a trail are inherent in the alignment itself. The distance a trail is set back from crops is for typical farm practices. For example, providing room for farm equipment to maneuver without nearing the trail reduces potential conflicts between trail users and farming practices.

Dogs on trails near cattle and other livestock may impact operations. Trail design and regulations can be used to mitigate potential problems. For example dogs should be required to be on leash at all times so they do not chase cattle. Special

fencing separating the trail from the livestock can also improve the situation. Though access for dogs is extremely popular, there may be locations where dogs must be prohibited on the trail.

Theft and Vandalism

The theft of produce is a significant concern of the agricultural community. Like other security issues, this problem is not directly related to trail use, and “daylighting” the area with significant public use could actually reduce theft. To reinforce efforts to prevent theft, trail managing agencies have provided fencing, signage reflecting laws and penalties, public information and trail patrol.

A study done by the Rails to Trails Conservancy found rural trails have incidents of crime at much lower rates per population than suburban and urban trails.⁴ In fact, trails can provide additional “eyes” for the agricultural community and can be regarded as an improvement because they bring local community members and families to the area. In many areas of the United State and around the world, trails peacefully coexist with agriculture without significant issues.

Loss of Farm Land

Agricultural land is an important part of the Delta region. Agriculture drives the local economy and supplies crops for California and the United States. The Delta Protection Commission does not support taking agricultural lands out of production. Trail access does not require a significant amount of land, and often can be incorporated into boundary and border areas where there is minimal impact on usable agricultural land. Also, the purchase of a portion of land or an easement can provide vital cash to an agricultural owner that would otherwise not be available without ceasing agricultural operations.

⁴ Rails to Trails Conservancy, “Rail-Trails and Safe Communities,” 1998.

Liability: Spraying and Trespassing

For the past 30 years, agricultural landowners in California who own land through which a trail passes are protected by the State's Recreational Use Statute. This statute, California Civil Code § 846 was enacted to encourage private landowners to allow recreational public use of their land without the risk of liability. The Statute makes landowners immune from liability for injuries sustained by individuals using their land for recreational purposes without fee payment. Over the thirty-year period the Statute has been in place, the judgments made by the California Courts have predominantly upheld the purpose of this Statute. Additionally, farming is protected under the California Right to Farm Act which prevents nuisance or incompatibility lawsuits against existing operations.

Spraying

Typical farming practices such as spraying that may conflict with trail access can be addressed in several ways. First, by providing trail users with adequate warning about the risks they are assuming. For example, in order to prevent nuisance claims triggered by the spraying of pesticides, warning signs and a spraying schedule may be posted at trailheads and along the trail to notify trail users of the risks associated with trail use. Case law pertaining to the Recreational Use Statute includes a finding that warning signs are sufficient to show the absence of willful or malicious conduct on part of the land owner.⁵ Sonoma County Regional Parks Department manages the thirteen mile West County Trail adjacent to vineyards and did not receive complaints about conflicts between trail users and vineyard owners who sprayed grapes.⁶

Additionally, trails can be closed during periods of spraying and during other agricultural operations. This can be part of an easement or other access arrangement or solely due to operations. In some cases, this is accomplished by gates and signs controlled by the farmer.

Trespassing

Appropriate trail design can mitigate liability presented by trespassing. As the saying goes, good fences make good neighbors. The installation of fences along the trail is an internal part of the defense against liability as it prevents trail users from making attractive nuisance claims. An attractive nuisance claim hinges on the tacit "invitation" of children onto a property by a nuisance, such as livestock, that is attractive to children.⁷ The construction of a fence, which bars children from entry and warns against nuisance, is a defensible precaution against attractive nuisance claims. The installation of a fence clearly demarcates the boundary between private, productive agricultural land and the trail facility.

Good communication and public information can also prevent trespassing. Signs posted along the trail by the management agency asking trail users to respect their agricultural neighbors and 'no trespassing' signs posted by the trail managers and property owners can help deter trespassing. Additionally, regular patrols, whether by security or volunteer groups can deter crime and trespassing. Finally, staff or docent

⁵ California Recreational Trail Use Statute and Liability Handbook (Bay Area Ridge Trail Council, 1998).

⁶ Sonoma County Draft Outdoor Recreation Plan 2003 Appendix 6.

⁷ McEowen, Roger A. "Recreational Use of Private Lands: Associated Legal Issues and Concerns" (The National Agricultural Law Center, 2003).

walks and talks can educate trail users about agriculture and related challenges and encourage cooperation from trail users.

Spread of Invasive Species

Many habitats in California have become dominated by non-native species. Many of these non-native species are known as “invasive” species, so-named because they rapidly colonize new areas and cause harm to the native species, agricultural crops or livestock that are present. Some species are deliberately introduced because they are thought to have value for wildlife, horticulture, or agriculture; others are accidentally transferred by vehicles and landscaping equipments. Trails can become avenues of introduction and spread when invasive species, whether seeds or insects, are carried in or on animals, vehicles, bicycle tires, shoes, boats, commercial goods, produce or clothing of trail users.

Examples of invasive species in Contra Costa County include white horse nettle, artichoke thistle, and purple loosestrife. Red subania is a known invasive species in Solano County. Each county’s Department of Agriculture works with local agencies and park districts to manage invasive species. In addition to weed seeds and insects, agricultural representatives are concerned about pathogens that can be carried into the fields from the outside. In addition to the potential direct impacts, farmers need to be able to assure their buyers that the growing conditions of their fields are safe from outside contaminants.

Spread of invasive species along trails can be mitigated in the following ways:

- Further research and coordination with the Farm Bureaus, County Agriculture Committees, and agricultural advisory agencies should be undertaken as an early part of detailed trail planning to identify specific issues and potential solutions, including conditions where trails may not be compatible with agriculture, or are feasible only under specific controlled conditions.
- Trails should be kept clear of invasive species and known infected areas should be monitored and maintained.
- Equipment, such as mowers, should be cleaned before leaving the immediate area to prevent spread of any invasive species. This includes water equipment as well as there is the potential for transfer of aquatic organisms on boats, jet skis and other watercraft.
- Train maintenance staff and volunteers to recognize invasive species.
- Vehicles, such as trail maintenance, Caltrans, and PG&E trucks, should be cleaned before leaving the immediate area.
- Encourage collaboration with the public to help identify invasive species. Organizations such as native plant societies or the Sierra Club may help with identification.
- Educational signage should be used to inform trail users of both native and invasive species. An aware public can help identify potential problem areas. Additionally, the signage can add agricultural value to the trail.

6. Levee Integrity and Maintenance

6.1 Challenges

There are over 1,100 miles of levees protecting 700,000 acres in the Delta. This area consists of agricultural land, urbanized areas, highways and utilities. It has been protected by levees since the 1860's.

Levees pose both opportunities and challenges to the Delta Trail. Land reclamation and agriculture have led to subsidence of the land surface on the developed islands in the central and western Delta. This subsidence is occurring at long-term average rate of one to three inches per year. As subsidence continues, the levees must be regularly maintained and periodically raised and strengthened against this increase in stress. Today, many of the islands in the central Delta are approximately 10 to 15 feet below sea level. The levees are fragile and are susceptible to four types of events that can influence their integrity:

The trail planning process should include an assessment of anticipated effects of levee integrity on recommended trail alignments and a strategy for addressing these impacts.

1. Subsidence: The land is subsiding as a result of the oxidation of soils due to farming.
2. Changing Inflows: Winter runoff from the mountain regions feeding the Delta is increasing in intensity.
3. Earthquakes: Levees are constructed on fragile foundations and are susceptible to earthquakes.
4. Sea Level Rise: Sea level rise will not only raise water elevations in the Delta, it will increase pressure on the levees themselves.

Additionally, levee maintenance may interfere with the feasibility of a trail alignment on a levee. Levee maintenance includes patrol and monitoring, maintenance of the surface and banks of the levees, vegetation management, and in some instances placement of dredged or imported fill material to build up the levee, which would conflict with trail improvements.

It is important to note that the Delta levees are owned and/or managed by public agencies, reclamation districts and private land owners. Access to privately owned levees is addressed under Property Access earlier in this Memorandum.

Sea level rise has the potential to impact the Delta in several ways. As sea level rises due to global warming, higher storm surges may cause greater tidal damage and flooding and reach portions of the Delta historically untouched by sea waters. According to the National Oceanic and Atmospheric Administration (NOAA), the mean sea level trend at its Port Chicago Station near Suisun Bay is 2.08 mm/year based on 2006 data, which is equivalent to a change of 8.18 inches in 100 years. More recent analyses indicate that sea level rise from warming oceans may be about 55 inches (1.4 meters) by the year 2100, or even higher depending upon the rate at which glaciers and other ice sheets on land melt.

Sea level rise may affect levee stability and flooding potential that will in turn affect the Delta Trail. Erosion, breaching and overtopping of levees upon which the trail is built by wind waves could destroy or damage the trail. Depending on the severity of the event and the integrity of the levees, breaching of the

levee may cut or damage the trail which may require closure, and if possible, rerouting. Additionally, bridge structures or water access facilities that are part of the trail network may be subject to increased wind, wave and tidal erosion.

6.2 Potential Solutions



The trail planning process should be based on detailed information regarding the stability and improvement, maintenance of levees considered for parts of the trail route.

In response to concerns regarding levee integrity, the State of California has undertaken several initiatives to define the risk of levee

failure, improve physical systems, and reduce the impact of levee failures. The California State Department of Water Resources (DWR) and the U.S. Army Corps of Engineers have partnered to develop an analysis of levee risks related to floods, earthquakes, subsidence and climate change. DWR has released the Delta Risk Management Strategy Phase I Report. This report will guide the development of strategies to manage levee failure risks and to improve the management of state funding that supports levee maintenance and improvement.

The CALFED Levee System Integrity Program maintains and improves the integrity of the Delta levees. Since 2000, the program has provided for protection and maintenance for nearly 700 miles of levees, ongoing maintenance for 600 miles of levees and provided improved stability for 45 miles of levees.

However, the levee system for the most part is still an un-engineered dirt structure with stability issues.

Consideration for Delta Trail alignments on levees should begin with coordination with CALFED, DWR, and the Army Corps of Engineers as well as the reclamation districts, agencies and private individuals who own the levees. The process should begin with a detailed review facilities, plans, programs and concerns. Additionally, designated parties responsible for maintenance should be part of the trail study and planning process so maintenance of



Delta Levee Road

the levees and the trail can be coordinated.

To minimize potential adverse impacts to the Delta Trail from sea level rise, the trail planning process where levee routes are considered should consider specific data and solutions regarding stabilization of the levees, including impacts of sea level rise. The trail system cannot reasonably afford to take on responsibility for addressing these challenges, but can support the efforts of the responsible agencies to ensure that the levees are safe enough to warrant the investment in the establishment of the trail. These assurances should include an assessment of anticipated effects of climate change on the levee, and a strategy for addressing these conditions in trail project prioritization and alignment siting. For example, in response to concerns over sea level rise, the California Coastal Conservancy (SCC) Board adopted the Climate Change Policy and the Project Selection Criteria in 2009. The SCC's Strategic Plan 2007 identifies the many effects that climate change will have on ocean, coastal and near-coastal resources. The SCC Strategic Plan reiterates the need to consider these impacts in determining the priority of expenditures in the design and siting of SCC-funded infrastructure projects, to support others in order to improve our understanding of the effects of climate change and to identify tools to mitigate and plan for a range of predicted changes.

7. Water Quality

7.1 Challenges

Animal impacts to water quality can be mitigated through education and design.

The Delta is a source of drinking water for 23 million Californians, the location of a \$27 billion agricultural industry, and the largest estuary habitat on the West Coast. It is essential to maintain the water quality in the Delta.⁸ There are federal and state laws, regulations, and regional plans that have established water quality standards applicable to the Delta or that could expand the role of resource agencies in water quality standards. These include the federal Clean Water Act, the Endangered Species Act, the Magnuson-Stevens Fishery Conservation and Management Act, the California Toxics Rule, California State Water Resources Control Board water quality plans, policies and regulations, the Bay-Delta Water Quality

Plan, and the state's Porter-Cologne Water Quality Control Act. Trail projects must meet the applicable standards outlined by these laws, regulations, and regional plans.

Potential trail-related impacts to water quality could include erosion, siltation, or spillages associated with trail construction or trail use and maintenance, and fecal matter from dogs or horses.

During trail construction there are opportunities for water quality to be negatively affected by the temporary disturbance of vegetation and soil. Building activities at construction, storage, and staging areas can increase erosion and sedimentation due to removal of native vegetation and the temporary accumulation and relocation of topsoil and spoils.

Erosion can also occur following implementation of a trail from improper trail design, use, or lack of maintenance.

Poorly designed trails that do not allow efficient surface drainage and water run-off can disrupt natural hydrological processes, increase surface erosion, and generate increased sediment flow, all of which can affect water quality. Even well-designed trails can develop erosion problems if they are not maintained properly.

Persistent or on-going erosion can also impact water quality over time. Horses, bicycles, and foot traffic can pulverize and gradually wear down trail surfaces. Cutbank and inboard ditch erosion (from maintenance activities and natural causes) and wet weather storm surges can concentrate runoff, sending silts and clays into waterways and riparian areas.

Sediments from urban runoff contain naturally occurring heavy metals (such as arsenic and copper), nutrients (such as phosphorus and nitrogen), and biological pathogens (such as coliform, cryptosporidium and giardia). Sediments that are transported and deposited in waterways also create a more favorable environment for weeds and algae which in turn can cause a decrease in water clarity and create unpleasant odors.

⁸ Delta Fact Sheet. Dollars are 2001.

In addition to sediment related impacts, trails can also contribute to water quality degradation by introducing other types of pollutants such as fuel or oil from construction and maintenance vehicles, animal waste matter, and human waste matter if adequate restrooms are not provided.

Fecal matter from dogs and horses can introduce pathogens into water and the release of nutrients from the decaying matter can contribute to eutrophication, promoting algae growth, and limiting light penetration and growth of aquatic plants. Studies have shown that 95% of the fecal coliform found in urban stormwater is of non-human origin, and a Seattle, Washington Study found that nearly 20% of bacteria could be matched with dogs.⁹

While horse manure can carry *Giardia* spp., *Cryptosporidium* spp, and fecal *Escherichia coli*, studies have shown that the first two organisms are found only rarely in horse manure, and fecal *E. coli* is not present in horse manure to the density that it is in many wild mammals. Thus dogs are the primary concern regarding water quality.



Delta Shoreline in Rio Vista

7.2 Potential Solutions

The Delta Trail will potentially benefit water quality by providing more non-motorized alternatives for travel in the Delta region, however, trail projects and use could create local, limited impacts. There are numerous ways to avoid or minimize potential trail-related impacts to water quality due to erosion, sedimentation, and undesired animal-source pathogens. The first step is to ensure that best practices are maintained during construction.

Trail construction water quality impacts include disturbance of previously vegetated surfaces, dust particles deposited into the Delta, and disturbed sediment and topsoil release into adjacent waterways. However, the majority of the negative impacts of construction can be mitigated standard soil stabilization, dust and drainage control measures..

The Marin Municipal Water District (MMWD) provides an extensive trail system throughout its watershed lands similar to the low-intensity uses that are planned for The Delta. The Water Quality Best Management Practices contained in Chapter 3.1 of the Road and Trail Management Plan, and Environmental Protection Measures, contained in Chapter 3.3, are designed to address the impacts resulting from trail construction and use.

⁹ Alderiso et. Al. 1996, Trial et. Al. 1993



Dog waste dispensers in Pittsburg

In general, before any trail construction begins all necessary efforts to prevent erosion, stabilize slopes, control the volume of runoff, and divert this run-off away from construction areas will reduce erosion and water quality issues.

There are also best practices for addressing stormwater runoff. The techniques are designed to reduce storm water volume, peak flows, and nonpoint source pollution. California's nine Regional Water Control Boards establish stormwater requirements for each region and these guidelines then inform the laws set by individual counties and municipalities. San Francisco's Public Utilities Commission publishes a comprehensive set of Stormwater Design Guidelines, including a fact sheet for best practices in the use of wet ponds, detention ponds, infiltration basins, vegetated swales, biofilters, and constructed wetlands.

It is also essential to control erosion through the design of the trail itself. The Bay Area Ridge Trail Council has developed standard design details and construction and maintenance guidelines through many years of study, experience and collaboration between trail building and land management agencies. The result is trails that have minimal impact to water quality and require little on-going maintenance. Trails are carefully routed to avoid wet areas. They are designed to integrate with the natural topography and drainage patterns and to take advantage of the natural filtering and erosion control properties of the vegetation and soil. Bridges could be used to span major drainages, ideally without interfering with the back sor bottom.. Trails are "out-sloped" for efficient and natural sheet flow. "Rolling dips" and rock fords, boardwalks and causeways are other proven design details that preserve natural drainage and protect water quality. Maintaining these natural drainage systems and patterns also extends to staging and parking areas, which may be surfaced with base rock or permeable pavement to avoid creation of mud and allow natural rainwater flow, infiltration and provide d with vegetated swales to collect and absorb runoff.

Persistent or ongoing erosion can also be mitigated. The American River Parkway includes an erosion control program. This anticipatory erosion control program is based on identifying and treating eroding sites before they become a critical threat to the levee system and ideally before there are impacts on riparian habitat. The program works towards early intervention and relies on methods of protection that minimize impacts and reduce future costs. Potential erosion sites must be regularly monitored and evaluated as to the likelihood of an unacceptable loss of material. Each project considers the nature of the erosion threat and the method for controlling erosion with the least damage to riparian vegetation, wildlife, and the aesthetics of the final product.

Design strategies to address ongoing erosion include many of those mentioned earlier to reduce the concentration, velocity, and volume of run-off including the use of traps, swales, biofilters, ponds, and infiltration basins and trenches.

Improving vegetation cover through mulching, seeding, and re-planting is another technique for mitigating concentrated runoff and ongoing erosion. Certain native plants grow relatively quickly, reduce surface erosion, and improve the quality of the soil. Native shrubs can improve slope stability by providing stronger root systems and long lasting vegetative cover. Hardwood and coniferous tree species, when planted in their appropriate range, also contribute to land stability and control of ongoing erosion.

Impacts to water quality from the introduction of animal fecal matter can also be mitigated. As mentioned earlier, dogs are considered the biggest problem in this area; horses less so. Appropriate trail infrastructure and education of dog owners can minimize the adverse impacts of these animal pathogens. Trails designed with trash receptacles and dog waste bag dispensers can help keep trails clean. Many agencies provide waste bag stations and waste receptacles and agency staff, volunteer trail patrol, and dog owner groups are actively involved in education and compliance activities. Clear and well-enforced regulations that require dogs to be kept on leashes also help minimize impacts to water quality. Finally, areas with serious problems or sensitivities can be closed to dogs.

8. Environmental Resources

8.1 Challenges

While some trail projects can include benefits to natural resources, it is important to balance trail use with preservation.

The Delta includes natural and cultural resources that may constrain trail siting and alignment. Natural resources include natural habitat, special status and protected status species, unique and protected landforms, significant trees, designated wildlife and habitat protection areas and mitigation sites. Cultural resources include historic buildings and structures, historic districts, historic sites, culturally sacred sites, prehistoric and historic archaeological sites, and other prehistoric and historic objects and artifacts. Scenic resources may also fall into this category.

Natural and cultural resources can be a significant constraint to planning and implementing a trail. Environmental review for trail projects is required under the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). These require projects be analyzed for potential impacts to cultural and historic resources. The requirements include a review by the State Historic Preservation Office (SHPO) for any known significant historic artifacts. The process may also involve obtaining a number of permits from resource management agencies including the California Department of Fish and Game, the California Water Resources Control Board, the U.S. Army Corps of Engineers (where waterways are affected), the U.S. Fish and Wildlife Service (often through consultation with the Army Corps of Engineers).

The development of a trail system can have adverse impacts on natural resources. Examples include temporary or short term disturbances to the foraging behavior of wildlife and longer term, less predictable changes to the overall ecological health of critical habitat and native ecosystems.

Trails are often sited near shoreline, riparian, and other biological rich habitats. When people and their pets stray from trails, native plant habitat can be trampled or picked, soils can be compacted, and conditions can be created that favor non-native weeds and other invasive species. Habitat or vegetation that has been modified or removed during the building of a trail may no longer be available for wildlife and create conditions more prone to flooding, erosion, and wildfire.

The introduction of invasive, non-native plants and animals, as discussed in the Agricultural Resources section, is also a threat to natural resources. The harm is generally caused because the invasive species take over the habitat, significantly reducing the diversity of species present and significantly reducing or eliminating the presence of native species. Some invasive non-native plant species are actually damaging to native wildlife that attempt to feed on or otherwise use the plants.

Trail construction and use could directly or indirectly impact cultural resources. New facilities and changes in land use that affect use patterns or intensify use could impact resources that are important to the entire Delta and beyond through overuse or during construction or maintenance. When a resource is subsurface, it is possible that construction work could damage the resource before crews are aware that the resource is present.

Numerous Federal and State agencies oversee natural and cultural resource protection throughout the Delta. In particular, trail planning efforts will need to be coordinated with the Sacramento-San Joaquin Delta Conservancy¹⁰ (Conservancy), a state agency created to work in collaboration and cooperation with local governments and interested parties to balance ecosystem restoration and public use and enjoyment of the Delta. Coordination with all applicable Federal and State agencies will be necessary to ensure that the environmental protections each agency oversees are met.

8.2 Potential Solutions

Delta Trail projects will be subject to environmental review, as required by the California Environmental Quality Act (CEQA) and, where federal jurisdiction is involved, the National Environmental Policy Act (NEPA). Environmental review includes assessment of potential impacts to biological, cultural, and historic resources, including review by the State Historic Preservation Office (SHPO) for any known significant historic artifacts. Where feasible, CEQA and NEPA require mitigation of any potentially significant impact to a less than significant level. . The trail planning process may also require issuance of permits from resource management agencies including the California Department of Fish and Game, the California Water Resources Control Board, the U.S. Army Corps of Engineers (where waterways are affected), and the U.S. Fish and Wildlife Service (often through consultation with the Army Corps of Engineers). Coordination with the Conservancy should continue in subsequent planning phases of the Delta Trail. The Conservancy is governed by a board consisting of 11 voting members and 12 non-voting members. Voting members include the secretary of the Natural Resources Agency; the director of Finance; one member each from the five Delta counties boards of supervisors; two members appointed by the governor, and one public member appointed by the Senate and one by the Assembly.

When planning and designing a trail system, several techniques can be employed to avoid or largely mitigate potential negative impacts on natural and cultural resources. Methods such as ecological restoration and promoting public awareness help to compensate for negative effects, while improving natural and cultural landscapes.

Natural resource conservation relies on an understanding and mapping of the locations and extent of geographic constraints and sensitive and critical biological habitats. Areas with known constraints can then be protected through avoidance or by applying conservation policies and standards to development that may otherwise result in significant adverse effects. For example, the application of conservation practices may result in a braided trail route alternative that avoids or minimizes potential adverse impacts to sensitive habitats.



Marsh Creek Trail in Oakley

¹⁰ Established by the Sacramento-San Joaquin Delta Conservancy Act (November 2009) (California Public Resources Code (PRC) 32320-32322).

Coupling trail projects in environmentally sensitive areas with mitigation efforts can help to offset negative impacts to natural resources. Mitigation measures include habitat restoration, erosion control, debris removal, and water quality enhancements. For example, in the Lake Tahoe Basin, new trail segments include drainage systems to divert sediment from the lake. A new trail in Marin County will include removal of a railroad trestle contaminated with creosote from a wetland. In addition, new trail projects are often combined with the acquisition of land or easements, which also serve to protect natural resources.

While some trail projects include benefits to natural resources, it is important to balance trail use with preservation. Early trail planning should identify and consider areas that have significant environmental constraints. Using GIS to map natural resources, including streams, rivers, floodplains, Streamside Management Areas, and National Wetland Inventory wetlands, aids in the identification of environmentally sensitive areas. Additional resources include the U.S. Fish and Wildlife Service's Endangered Species Program and the Department of Fish and Game's (CDFG's) California Natural Diversity Database (CNDDB).

The San Francisco Bay Trail provides an excellent example of balancing trail use and the preservation of natural resources. While the Bay Trail provides access to wetlands and other sensitive natural features, specific trails were designed to protect these areas. The overall trail system alignment includes spine, spur and connector trails. This serves to protect natural areas by routing the majority of trail users along the spine trail. Trails in environmentally sensitive areas are reserved for trail users who specifically intend to pursue a more interpretive, as opposed to recreational, trail experience.

When trail alignments approach areas with cultural resources, negative impacts should be avoided, if possible, or mitigated. The initial step in this process is to identify known cultural locations within the project area. The California Historical Resources Inventory System (CHRIS) is an important data source for cultural resource location identification. The Northwest Information Center at Sonoma State University maintains these records for Solano and Contra Costa counties.

Once the locations of cultural resources are identified, or if the trail is being studied through an area that has not been previously disturbed (e.g. not on a levee), a consulting archeologist should be hired to determine their significance or cultural importance. Based on the locations and significance of cultural resources, the trail alignment should be charted to avoid negative impacts on these areas. Although avoidance is the preferred option, mitigation should be considered in cases with alignment constraints. Mitigation techniques for impacts on cultural resources are purposely left undefined by state agencies. If it is determined that cultural resources will be adversely impacted, it is often imperative to involve the affected parties directly and solicit their input. In the Delta, Native Americans and farmers could have specific cultural or spiritual concerns, which cannot be addressed through a standardized environmental evaluation process.

Provided negative impacts are avoided or mitigated, trail projects can also be complementary to cultural resource areas. Trails can create awareness of the importance of these areas, as well as foster public stewardship. This can be achieved by providing public access to similar sites, enriched with interpretive signage and kiosks explaining the cultural and historic significance of the area.

9. Funding

9.1 Challenges

Funding a regional trail system, like any major public facility, can be a significant challenge. Funding is necessary for planning, technical surveys and studies, design, construction, operation, and maintenance. In particular, the need for an ongoing funding source and/or endowment for trail operation and maintenance presents a significant challenge.

Trails are generally funded through many diverse federal, state, regional and local government sources, and private sources, depending on project features, priorities and opportunities. Eligibility for the various funding programs and sources varies depending on whether the facility would serve utilitarian or recreational purposes. Funding for recreational trails is scarce at this time, presenting a particular challenge to the implementation of rural, recreational segments of the Delta Trail.

Any trail plan is incomplete unless all these project phases from planning to maintenance are addressed, but typically the funding can only be found in stages, and implementation occurs on an opportunity basis, as funds are available.

Private funding from citizens, corporations, philanthropic organizations, non-profits and local businesses can assist with trail planning, implementation and maintenance.

9.2 Potential Solutions

Local agencies typically employ a variety of public and private funding sources to finance trails and other bicycle and pedestrian improvements. Public funding sources include federal, state, regional and local as well as some non-traditional funding sources.

As transportation facilities, the majority of funding for bicycle and pedestrian projects and programs is derived from Federal sources, particularly the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) which supports numerous funding programs administered at the state and regional levels. State funding sources include the Bicycle Transportation Account (BTA), the Safe Routes to School program (SR2S) and Transportation Planning Grant programs, all of which are administered by Caltrans.

Regional funding sources for bicycle and pedestrian projects and programs are allocated primarily through Regional Transportation Planning Agencies (RTPAs) and Metropolitan Planning Organizations (MPOs) which administer several federal and state programs. The Metropolitan Transportation Commission - the Bay Area's RTPA - oversees numerous programs, including the federal government's Transportation Enhancements (TE) and Congestion Management and Air Quality Improvement (CMAQ) programs and the state's Transportation Development Act (TDA) Article 3 funds and the State Transportation Improvement Program (STIP). Alternative financing strategies, such as developer impact fees and sales tax revenue, and potential partnerships will most likely be needed to implement the Delta Trail network.

Funding for recreational trail projects is derived from the National Scenic Byways Program (administered by FHWA), the Recreational Trail Program (State Parks), the Land and Water Conservation Fund (State Parks), the Public Access Program (Wildlife Conservation Board), and the Coastal Conservancy Grants Program (Coastal Conservancy). EBRPD's Measure WW Local Grant Program also funds capital projects that provide land and facilities for recreational activities and services. Non-traditional funding sources include development impact fees and a special purpose sales tax to fund recreational trails.

The following section addresses private funding approaches including funding from citizens, corporations, philanthropic organizations, non-profits and local businesses.

Private Individual Donations

Private individual donations can come in the form of liquid investments (i.e. cash, stock, bonds), land, materials, labor or equipment use. Municipalities typically create funds to facilitate and simplify a transaction from an individual's donation to the given municipality. Donations are mainly received when a widely supported capital improvement program is implemented. Such donations can address capital budgets, specific projects or endow ongoing operation and maintenance.

A regional trail example is from the San Francisco Bay Trail. The San Francisco Bay Trail accepts financial donations from private individuals in two ways. Individuals can donate directly to the Bay Trail general fund or they can donate in memory of Bill Bliss, one of the founders of the Bay Trail.

Corporate Donations

Corporate donations are often received in the form of liquid investments (i.e. cash, stock, bonds) and in the form of land. Municipalities typically create funds to facilitate and simplify a transaction from a corporation's donation to the given municipality. Donations are mainly received when a widely supported capital improvement program is implemented. Such donations can improve capital budgets and/or projects.

A portion of the Bay Area Ridge Trail was in the form of a corporate donation from Lucasfilm Ltd. Lucasfilm Ltd. Donated 800 acres that will provide connections between Novato and the Golden Gate Bridge.

Corporate Sponsorships

Corporate sponsorships are often delivered in the form of services, personnel volunteers, liquid investments (cash or stock) or land. Municipalities often team with corporations for necessary and/or alternative funding. A sponsorship, which is the equivalent of a donation, usually involves some marketing elements or recognition in one form or another. The benefits of marketing often improve the image of the given corporation and are often thought to benefit both parties.

Duke Energy is a corporate sponsor of the Carolina Thread Trail and has provided cash, land and in-kind services. Other ways businesses can sponsor a trail are through organized volunteer efforts and providing supplies. REI has provided staff and t-shirts for volunteer efforts in the San Francisco Bay Area.

Fundraising / Campaign Drives

Organizations and individuals can participate in a fundraiser or a campaign drive. It is essential to market the purpose of a fundraiser to rally support and financial backing. Oftentimes fundraising satisfies the need for public awareness, public education, and financial support. Fundraising typically works best when the drive is intended for a specific purpose.

San Francisco's annual Tour de Fat is an outdoor event that includes a bicycle parade, performances, and a bike rodeo. The 2009 event raised funds for the Bay Area Ridge Trail.

Trails are sometimes completed, in part or in their entirety, as service club, Boy Scout troop, or community association projects.

Volunteers

Volunteers can provide essential trail services and labor to maintain and enhance existing trails and may also help construct new trails. Volunteers often come from advocacy and service organizations as well as local businesses and help with pruning, erosion control, post installation and related trail improvements.



Trail Maintenance Volunteers

10. Trail Design

10.1 Challenges

The appropriate type of trail facility depends on the intended users, the setting, and the requirements and standards of the funding or approving agencies.

The term “trail” covers a very broad range of facility types, and can include formal and informal facilities, bike routes, sidewalks, paved and unpaved paths, and even water routes. The appropriate type of trail facility depends on the intended users, the setting, and the requirements and standards of the funding or approving agencies. Trail design for the Delta Trail must address numerous challenges, including:

- Accommodating the needs of a wide range of users. The trail system should be designed to accommodate a wide range of users of varied abilities including bicyclists (both road and mountain bikes), pedestrians/hikers (and depending on the setting, including strollers, skaters, and people walking dogs); people in wheelchairs and with other physical limitations, and equestrians, depending on the setting.
- Connecting to Important Destinations. The Delta Trail should provide connections to destinations located throughout the Delta.
- Coordination between Multiple Jurisdictions and Landowners. The Delta Trail will span five counties, potentially crossing property owned and/or managed by federal, state or local entities or private landowners. The trail will need to meet the needs of these various landowners and management agencies.
- Implementing a Consistent Design Standard. Trails serve transportation as well as recreational functions and are often located in the public right-of-way. As transportation facilities, there are prescribed design standards that may be applicable depending on the trail function and funding source.
- Responding to a Variety of Physical Environments. The trail system will need to respond to a variety of physical environments, including estuarine and urban settings.
- Minimizing Potential Adverse Impacts to Environmental and Cultural Resources. Trail design should address the Delta’s sensitive environmental and cultural resources.
- Addressing Other Challenges. It is important that the trail design address the other previously mentioned challenges, such as public safety and impacts to adjacent properties.

10.2 Recommended Solutions

There are three basic ways to organize and define trail systems: 1) a hierarchy of trail classifications based on the importance of connections; 2) design standards or guidelines for specific types of trails in specific settings or a specific agency’s jurisdiction, and; 3) designs developed or adapted for specific intended users and mixes of users. Each of these methods is applicable to the Delta Trail, but should be adapted to unique conditions and local preferences.

Related challenges are addressed under the Private Property Impacts and Environmental Resources sections of this Memorandum.

Connecting to Important Destinations

Connectivity is important to facilitate utilitarian and recreational trips to destinations such as work, school, shopping and parks. Identification of important destinations and the trail alignments to access them will be determined during the next stage of the Delta Trail planning process. Trail alignments and key destinations will be determined through a public process involving identification of community goals and policies, assessment of community needs, data collection on existing opportunities and constraints and creating an inventory of possible alignments. Many of these alignments will be reflected in current adopted General Plans, Bicycle or Pedestrian Master Plan or other appropriate management plans of the local governments and public entities within the trail corridor. Potential new alignments and connection ideas would be referred back through these local processes for consideration of adoption.

Trail Design Standards and Guidelines

Many agencies, including the California Department of Transportation (Caltrans), the U.S. Forest Service, the California Department of Parks and Recreation (State Parks), and the East Bay Regional Park District have their own standards for trail or pathway design. These standards must typically be followed for trails in these agencies' jurisdictions. All design standards and guidelines must be carefully adapted to the specific local setting and needs by the trail designers and engineers. In addition to local setting, trail design standards and guidelines will need to include designs appropriate for use within the variety of physical environments occurring in the Delta, such as estuarine environments. Where there are no set standards or guidelines yet for the Delta Trail, there are many examples of "best practices" that can be referenced for the layout and design of the trail facility.

This section presents some applicable standards and guidelines for consideration in design of a complete trail system. These include references for trails in urban, transportation-oriented settings, as well as trails in rural, more recreation-oriented settings, though there may be combinations of these two types of trails. There are numerous excellent references listed in the Delta Trail Best Practices Memorandum that provide detailed guidance for design and maintenance in various settings and physical environments. Agencies such as the U.S. Forest Service and California Department of Parks and Recreation have their own trail standards and guidebooks.

Published Design Standards

Urban/Transportation Trails

Trails in urban settings and facilities that are formally designated for transportation purposes and connections between improved facilities are typically paved, or "hard" surfaced and designed to meet adopted transportation and disabled access design standards.

In California, key planning, design, and implementation standards for urban, transportation-related trails include the following sources:

- American Association of State Highway and Transportation Officials (AASHTO), A Policy on Geometric Design of Highways and Streets, 1994.

- AASHTO, Guide for the Development of Bicycle Facilities, 1999.
- U.S. Department of Transportation (USDOT), Federal Highway Administration (FHA), Manual of Uniform Traffic Control Devices (MUTCD), 2009.
- Caltrans: Highway Design Manual (Chapter 1000: Bikeway Planning and Design)
- Institute of Transportation Engineers (ITE), Design and Safety of Pedestrian Facilities, 1994.

Caltrans Bikeway Classifications

Caltrans has adopted classifications and associated detailed design standards that must be used in state right of ways and usually are required when there is state or federal transportation funding for a trail project. “Bikeways” as defined in the Caltrans Highway Design Manual include three basic types as described below and illustrated on the following page.

Class I Bikeways, often called “bike paths” or “multi-use paths” – a Class I bikeway provides bicycle travel on a paved right-of-way completely separated from any street or highway. Class I Bikeways also typically accommodate pedestrians

1. Class II Bikeways, often referred to as “bike lanes” – a Class II bikeway provides a striped, signed and marked lane for travel on a street or highway.
2. Class III Bikeways, generally referred to as “bike routes” – a Class III bikeway allows shared use with motor vehicle traffic and is identified by signing, and often pavement markings.

ADA Standards for Urban/Transportation Trails

Where trails are intended for transportation purposes and/or provide paths of travel to or between buildings or other formal use facilities, they must meet specific state and federal standards for accommodating people with disabilities, which includes considerations for wheelchairs and a broad range of mobility, visual, hearing, or other limitations set by the Americans with Disabilities Act (ADA). At a federal level the standards are set by the U.S. Architectural and Transportation Barriers Compliance Board. In California, the Division of the State Architect (DSA) is the agency that develops, adopts and publishes regulations to address the state’s own standards for access to people with disabilities to comply with ADA and in some cases exceed the federal standards. Useful references for these standards include:

- Accessible Rights-of-Way: A Design Guide, U.S. Architectural and Transportation Barriers Compliance Board (the Access Board), 1999.
- California Access Compliance Reference Manual, Division of the State Architect, 2003 or latest version.

Rural/Recreational Trails

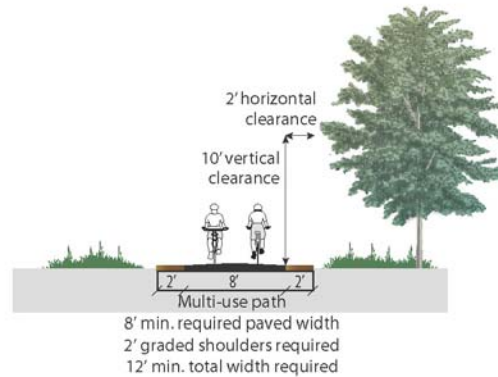
Trails in rural or remote settings and/or for rural recreational purposes are often unpaved or “soft” surfaced. Trails in rural areas may also serve an important transportation function, and may be paved and meet the urban/transportation trail standards above. Even unpaved trails may provide important local transportation functions, particularly access to open space without having to drive. Unpaved trails are best at accommodating hikers, mountain bicyclists and equestrians, and are not suitable for narrow-tired road bicycles and skating, and are less suitable for wheelchair and

other disabled access, although they should be designed to accommodate disabled access according to a more flexible set of standards than urban transportation facilities.

Agencies such as the California Department of Parks and Recreation have their own trail standards and guidebooks, which cover both “hard” and “soft” trails. Many rural or remote trail systems can be divided into “single track” trails, too narrow for motor vehicle use and suited to rough, steep terrain, and “road width” trails – including former or current ranch, logging, levee or fire roads adapted for use as trails, or double as trails.

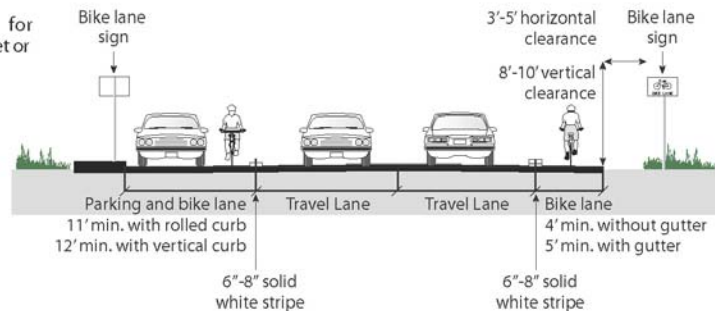
CLASS I Multi-Use Path

Provides a completely separated right of way for the exclusive use of bicycles and pedestrians with crossflow minimized.



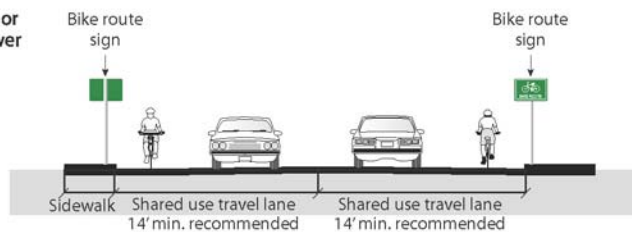
CLASS II Bike Lane

Provides a striped lane for one-way bike travel on a street or highway.



CLASS III Bike Route Signed Shared Roadway

Provides for shared use with pedestrian or motor vehicle traffic, typically on lower volume roadways.



Caltrans Bikeway Classes

ADA Design Standards for Recreational Trails

Detailed standards for design of recreational trails for access to people with disabilities are covered in a federal publication: Guidelines for Outdoor Developed Areas, Final Report of the Regulatory Negotiation Committee on Accessibility, September 30, 1999. This document (the Guidelines) is a draft regulation that is expected to be formally adopted in the near future as part of the Americans with Disabilities Act (ADA).

The California Division of the State Architect (DSA) has formally recognized the federal guidelines as the standards for design of recreational trails in California. The California Department of Parks and Recreation has published its own standards book consistent with the guidelines, and Caltrans has also recognized these standards as applicable to recreational trails that may be allowed in state right-of-ways. This includes trails that accommodate mountain bikes, which Caltrans formerly classed with road bikes and technically allowed only on paved Class I bikeways.

Key references for trail design to comply with ADA and California standards include:

- Guidelines for Outdoor Developed Areas, Final Report of the Regulatory Negotiation Committee on Accessibility, September 30, 1999.
- Designing Sidewalks and Trails for Access, Part II of II: Best Practices Design Guide, Federal Highway Administration, 2001. <http://www.fhwa.dot.gov/environment/sidewalk2/index.htm>
- California State Parks Accessibility Guidelines, California Department of Parks and Recreation, 2005.

Water Trails

Water trails are mapped routes along waterways. Water trails are often identified and comprised of access points, boat launches, day use sites, and (in some cases) overnight camping areas. Design for water trails can vary widely and are generally governed by the agencies' jurisdiction in which the facility is constructed.

Typical water trail principles¹¹ for consideration in the planning of a water trail system include:

- Identification of Critical Areas. Identify critical areas such as hazards, navigational exclusion zones, unusual boating conditions, sensitive wildlife areas and other conditions requiring special considerations.
- Site Assessment and Planning. Site assessment planning for trailheads could include the following:
 - Conduct an opportunity and constraints study for potential trailhead locations
 - Create a trailhead improvement and management plan
 - Develop a plan for trailhead monitoring
- Development of a Water Trail Ethics Outreach Program.
 - Develop a water trail ethics program that teaches and promotes safe, low-impact boating practices and encourages the stewardship of water trail system. Consultation with an

¹¹ San Francisco Bay Conservation and Development Commission – Water trail Principles and Strategies. Sara Polgar-Water Trail Manager. March 21st, 2007

organization such as The Leave No Trace Center for Outdoor Ethics¹² could provide direction in engaging in this process. Sample ethics categories could include:

- Planning ahead and being prepared
- The use of designated trail heads
- Disposing of waste properly
- Leaving what you find
- Respecting wildlife
- Boating safety and consideration of others
- Promote boating and navigational safety through a water education program, active coordination among lake mariners' associations and regulatory agencies and appropriate launch facility design and management.

The following twelve general design guidelines¹³ should be considered in designing water trail systems for the Delta Trail:

1. Provide access points at fairly frequent intervals (5 miles).
2. Provide adequate parking to meet demand. Hand-carry launches should be hardened as well as boat ramps. Boat slides do well where banks are steep.
3. Have information kiosks and brochures at each access which orient users to the trail, and contain a map describing public use areas, sanitation stations, emergency telephone numbers and locations of telephones, camp sites, rules and regulations.
4. A "leave no trace" philosophy of use should be advocated in the literature and on information kiosks.
5. Camp sites should be hardened in heavy use areas. Most campsites should not be accessible to vehicles except for administrative access.
6. Riparian areas should be protected and maintained as functioning buffers.
7. A 'no open camp fire' policy should be forced.
8. Public lands should be clearly identified from the river.
9. Mile markers should be posted at intervals along the lake shore and shown to a map in the brochure.
10. Prohibitions against trespass on private land should be clearly stated in informational literature.
11. Group camping areas should be developed for scouts and other group use.
12. Provide sanitation facilities at public access points and periodically along trail (5 miles).

¹² Leave No Trace is a national and international program designed to assist outdoor enthusiasts with their decisions about how to reduce their impacts when they hike, camp, picnic, snowshoe, run, bike, hunt, paddle, ride horses, fish, ski or climb. The program strives to educate all those who enjoy the outdoors about the nature of their recreational impacts as well as techniques to prevent and minimize such impacts. Leave No Trace is best understood as an educational and ethical program, not as a set of rules and regulations.

¹³ The Virginia Greenways and Trails Toolbox, Virginia Department of Conservation and Recreation, 2007

Trail System Support Features

A complete trail system requires support facilities and amenities. Specific types, designs and locations of these features would be determined in conjunction with or after planning of specific trail segments, but the following paragraphs provide basic guidelines.

Trailheads

Good access to the trail system is a key element to its future success. Trailheads (formalized parking areas) serve the local and regional population arriving to use the regional trail system by car. Trailheads provide essential access to the trail system and provide essential facilities including parking, restrooms, and orientation and information signage for trail users. Trailheads are typically developed on public park lands, and can utilize existing facilities if trail use does not conflict with park use. Often trailheads can be established by arrangement with other types of public or private facilities where trail use is off-peak from the main land use.

Signage and Maps

A comprehensive directional system should be developed to inform and educate users about the trail and pathway system, and help them find their way. Signs should also be installed to warn and control motorists and trail users at road crossings. All such traffic safety signs and surface striping should be designed to comply with state and federal standards and best management practices.

Kiosks or map boards should be placed along major trails and trailheads, to orient users to the trail system, destinations, rules of use, and safety information. Published information on web sites and printed maps and brochures should be carefully coordinated with on-site maps and signs.

Opportunities for interpretive information could include the cultural and natural history of the Delta – its native populations and early settlers; local flora and fauna; water resources; and geology. Comprehensive and innovative signing systems make trail and pathway networks outstanding.

Amenities

Especially in more heavily used segments, user amenities help to make the trail system complete. Water fountains provide water for people (and pets, in some cases). Bicycle racks will allow recreational users to safely park their bikes if they wish to stop along the way, particularly at parks and other desirable destinations. Providing benches at key rest areas and viewpoints supports use of the trail by people of all ages, and provides an opportunity for users to stop and enjoy the trail setting. Trash receptacles and dog waste clean-up bag dispensers help keep the trail clean. Local artists can be commissioned to provide art for the trail system, making it unique and entertaining. Many trail art installations function as or are incorporated into signs, benches, shelters, or even the pavement surface.

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Appendix D. Best Practices Analysis

This appendix presents the Best Practices Memorandum for the Delta Trail.

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1. Introduction

This memorandum is one of the planning products for the Delta Trail Blueprint Report for Contra Costa and Solano Counties. It is funded through grants from the California Coastal Conservancy and Contra Costa County.

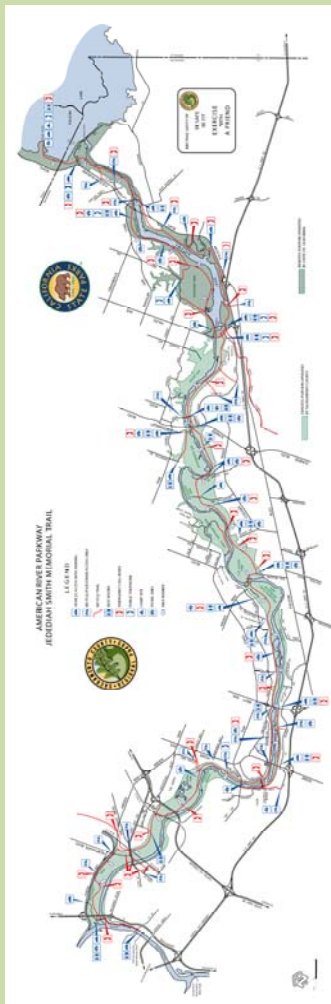
The Delta Trail Blueprint and planning process can be informed by the experiences and best practices of other regional trail systems. Planning trails that travel through numerous jurisdictions, environments and communities can be challenging. The planning, implementation and management approaches used by other major regional trail systems and the lessons learned from their efforts was studied as background for planning the Delta Trail.

This memorandum reviews best practices of seven selected regional trail systems:

1. American River Parkway, Sacramento County, California
2. Bay Area Ridge Trail, San Francisco Bay Area, California
3. California Coastal Trail, California Coast, California
4. Carolina Thread Trail, North and South Carolina
5. Monterey Bay Sanctuary Scenic Trail, Monterey and Santa Cruz Counties, California
6. Santa Paula Branch Line Recreational Trail, Ventura County, California
7. San Francisco Bay Trail, San Francisco Bay Area, California

These trails were selected because they meet one or more of the following three criteria:

- The trail network travels through multiple jurisdictions
- The trail is designed for variety of users including pedestrians, bicyclists, and equestrians
- The plan and design addresses concerns related to trail compatibility with agricultural issues.



2. American River Parkway

Sacramento County, CA

The American River Parkway is a regional park and trail in an open space greenbelt extending 29 miles from the Folsom Dam to the Old Sacramento Neighborhood. The network includes 82 miles of maintained bicycle and equestrian trails. In 1962 the American River Parkway Plan was adopted in concept and in 1976 the Parkway Plan was adopted as an element of the Sacramento County General Plan.

The American River Parkway is included in this review of best practices for its multi-jurisdictional qualities and because the trail is designed for pedestrians, bicyclists and equestrians.

2.1 Planning and Guiding Documents

The American River Parkway trail is guided by the American River Parkway Plan (2008).

2.2 Oversight Body

The Parkway does not have its own oversight body but is guided by the Sacramento County Board of Supervisors, the Sacramento Recreation and Parks Commission and the American River Parkway Advisory Committee.

The Sacramento Board of Supervisors is a five-member elected body representing the incorporated and unincorporated county. The Sacramento Recreation and Parks Commission has five members who are appointed by the County Board of Supervisors for four-year terms. Each Commissioner represents a county district. The American River Parkway Advisory Committee includes 14 members. Representatives from each county district and numerous stakeholder groups are represented. The Advisory Committee is described in further detail below.

2.3 Advisory Committees

Stakeholder Advisory Committees

The most recent adopted American River Parkway Plan (2008) included an Update Citizen's Advisory Committee. The Committee included 24 members who provided recommendations

to governmental agencies. The committee included representatives of recreational, environmental, business and community interests. Group meetings included six tours and/or public workshops and 34 committee meetings.

The American River Parkway Advisory Committee is another advisory group is a standing group that includes 14 members. Representatives from each county district and stakeholder groups are represented. The represented organizations and districts include:

- | | |
|---|---|
| 1. American River Natural History Association | 9. Recreation and Park Commission |
| 2. American River Parkway Foundation | 10. Sacramento Area Bicycle Advocates |
| 3. California Native Plant Society | 11. Sacramento Audubon Society |
| 4. District 1 | 12. Sacramento Valley Conservancy |
| 5. District 2 | 13. Save the American River Association |
| 6. District 3 | 14. Sierra Club, Mother Lode Chapter |
| 7. District 4 | |
| 8. District 5 | |

Technical Advisory Committees

The development of the 2008 American River Parkway Plan included two technical advisory committees (TAC): a community organization TAC and an agency TAC. The community organization TAC consisted of members from community organizations who self elected a representative. This representative was then approved by the County Board of Supervisors.

The agency TAC was made up of members from applicable regulatory agencies and a multi-jurisdictional project management team. These meetings were not open to the public.

2.4 Public Outreach

Public outreach for the 2008 plan update included the development of an Update Citizens Advisory Committee (UCAC) and a stakeholder committee. The Update Citizens Advisory Committee included 24 members representing the Parkway's diverse recreational, environmental, business and community interests. Appointments were made by the Sacramento County Board of Supervisors, The Sacramento City Council, and the Rancho Cordova City Council.

During the development of the update, a stakeholder assessment document was drafted outline the stage for public involvement. Preliminary interviews were conducted with stakeholders to assess and develop recommendations for the public outreach structure. The UCAC met nearly every six weeks for over two years. These meetings were open to the public. In addition to the UCAC meetings, project staff made presentations to local organizations and held several large public workshops.

2.5 Goals and Policies

The American River Parkway Plan includes four goals and five concept policies.

Goals

1. To provide appropriate access and facilities so that present and future generations can enjoy the amenities and resources of the Parkway which enhance the enjoyment of leisure activities.
2. To preserve, protect, interpret and improve the natural archaeological, historical and recreational resources of the Parkway, including adequate flow of high water, anadromous and resident fishes, migratory and resident wildlife, and diverse natural vegetation.
3. To mitigate adverse effects of activities and facilities adjacent to the Parkway.
4. To provide public safety and protection within and adjacent to the Parkway.

Concept Policies

2.5.1.11 Balanced Management

The American River Parkway is a unique regional asset that shall be managed to balance the goals of controlling flooding; preserving and enhancing native vegetation, native fish species, the naturalistic open space and environmental quality within the urban environment; maintaining and improving water flow and quality; providing adequate habitat connectivity and travel corridors to support migratory and resident wildlife; providing recreational opportunities; and ensuring public safety.

2.5.1.21 Recreation

The Parkway shall be oriented to passive, unstructured water-enhanced recreation activities which are appropriate in a natural environment, and which are not normally provided by other County recreational facilities. To this end, development in the Parkway shall be minimal, and facilities which are primarily visitor attractions should be placed in less sensitive areas within the County Park system. Insofar as possible, development shall not occur in areas where natural ecosystems are still relatively undisturbed.

2.5.1.31 Resource Protection

Limitation on the use of the Parkway through design and management tools to prevent overuse of the Parkway and preserve the environmental quality, thereby ensuring the integrity of the Parkway for future users.

2.5.1.41 Land Use

No existing publicly owned Parkway lands shall be disposed of through sale, lease, or de facto uses adverse to the goals and policies of this Plan, in order to assure the long-term protection and integrity of the present boundaries of the Parkway.

2.5.1.51 Cooperation

Cooperation in Parkway planning and management is essential, especially in recognizing the many important roles of jurisdictions and agencies with regulatory responsibilities within the Parkway.

2.6 Administration, Planning and Operation

Administration

There are numerous agencies with varying types of jurisdiction over the trail corridor, however Sacramento County Department of Regional Parks has primary responsibility and is the lead agency. Regional Parks is the public's point of contact. Other responsible agencies include State and Federal land managers and the California Department of Parks and Recreation. For example, the California Department of Fish and Game oversees fishing regulations and fish populations. The U.S. Army Corps of Engineers inspects levees within the Parkway. The California Department of Water Resources, the Central Valley Flood Protection Board, and the American River Flood Control District also have some authority over the corridor.

The Sacramento County Department of Regional Parks is also responsible for park and visitor services. These services include park ranger law enforcement/public safety services, natural resource protection, natural and cultural history interpretation, facility maintenance and operations, capital improvements, fee management and revenue recovery, habitat management, park planning and development, interagency collaboration on project planning and implementation and special event planning and implementation.

Planning and Implementation

The County of Sacramento Department of Planning and Community Development was the lead agency in the development of American River Parkway Plan (2008). The Parkway began as a concept in 1915; however it was not until 1962 when the American River Parkway was officially adopted in concept in the Sacramento County General Plan. Following its adoption, acquisitions of land on the American River Parkway began. In 1976, the first American River Parkway Plan was adopted as an element in the County General Plan. It has been updated in 1985 and again in 2008.

Staffing for the planning process included eight staff members from the County of Sacramento Department of Planning and Community Development.

The American River Parkway Plan's implementation is undertaken by the County of Sacramento Department of Regional Parks. The American River Parkway Plan (2008) does not include prioritization of projects. Implementation is dependent on available funding and local stakeholders.

Operation and Maintenance

Operation and maintenance of the parkway and trail is provided by the County of Sacramento Department of Regional Parks. Volunteers from groups such as the American River Parkway Foundation and the American River Parkway Volunteer Equestrian Trail Patrol also provide maintenance assistance.

2.7 Trail Design

The American River Parkway Plan (2008) includes designs to meet the needs of three types of users: equestrians, hikers, and bicyclists. The system is designed with three trail types: equestrian/hiking, pedestrian trails and bicycle trails.

Equestrian and Hiking Trails

These unpaved trails should be at least six feet wide and kept separate from pedestrian and bicycle trails to avoid conflicts with horses. Equestrian and hiking trails can also serve as maintenance access and a fire break.

Pedestrian Trails

Pedestrian Trails are unpaved trails that should have a natural, compacted surface that is stable, firm and slip resistant. The trail should be a minimum of 3 feet wide though 4 feet is preferable.

Bicycle Trails

These paved trails should be a wide smooth surface. All weather rubberized asphalt concrete surface is preferred.



3. Bay Area Ridge Trail

San Francisco Bay Area, CA

The Bay Area Ridge Trail (BART) is a proposed 550+ mile trail through nine counties along the ridgelines around the San Francisco Bay. The planning process began in 1987 with the formation of the Bay Area Ridge Trail Council and today over 310 miles of trail have been dedicated. The trail, once completed, will be a continuous multi-use trail serving mountain bicyclists, equestrians, and hikers/trail runners.

The Bay Area Ridge Trail is included in this review of best practices because of its multi-jurisdictional nature and design vision to reflect the character and landscape of each community.

3.1 Planning and Guiding Documents

The Bay Area Ridge Trail does not have an encompassing adopted planning document but alignments have been incorporated into local plans.

3.2 Oversight Body

The BART is overseen by the Bay Area Ridge Trail Council (BARTC), a nonprofit organization.

3.3 Advisory Committees

Trail Committee

The Bay Area Ridge Trail Council is advised by a standing Trail Committee. The committee is responsible for oversight of trail completion and for review of trail planning, acquisition, construction, and maintenance. Meetings are held ten times a year and membership includes representatives from each County Committee.

County Committees

Each county also has a BART County Committee. Priorities, processes, and resources differ by county but all work with agency partners and environmental organizations.

3.4 Public Outreach

The BARTC has an active program of activities, events and volunteer work days, advertized through its web site and its local committees. Public outreach for specific trail projects is coordinated by the local jurisdictions that sponsor them.

3.5 Administration, Planning and Operation

Administration

The BARTC has a small paid staff that reports to the Board of Directors. The BARTC staff and Board oversees the preparation and update of plans, maps, and records of proposed and completed trail segments.

Planning and Implementation

The BARTC staff and representatives support the planning and implementation of trails in coordination with the cities, counties, park districts and other agencies that typically implement the trail segments. Project segments are not prioritized but are built based on funding availability, right-of-way availability/acquisition, and completion of planning, design and environmental review.

Operation and Maintenance

Trail operation and maintenance varies by jurisdiction. In most cases, the agency with jurisdiction over the trail segment operates and maintains the trail. The BARTC has a large volunteer group who assist with trail maintenance at ‘work parties.’

3.6 Trail Design

Generally the design goal is an unpaved, rustic trail four to five feet wide suitable for mountain bikers, hikers, trail runners and equestrians. Specific trail design is determined by segment and is dependent on the site conditions, needs and guidelines of local jurisdictions. Currently, two-thirds of the trail is fully-multi-use.



4. California Coastal Trail

California Coast

The California Coastal Trail (CCT) is a proposed 1,200 mile trail running the length of the California Coast. In 1972, Proposition 20 provided for the establishment of a continuous pedestrian and bicycle trail system along or near the coast. The 1976 Coastal Act required local jurisdictions to identify a California Coastal Trail alignment in their local Coastal Programs.

Today, over half of the CCT is complete.

The California Coastal Trail is included in this review of best practices because of its multi-jurisdictional nature and design vision to reflect the character and landscape of each community.

4.1 Planning and Guiding Documents

The California Coastal Trail is guided by the document “Completing the California Coastal Trail” (2003). The report was developed by Coastal Conservancy staff with participation of the Coastal Commission and State Parks along with staff and volunteers from Coastwalk, a non-profit organization that has collaborated with the Coastal Conservancy to plan for the trail. “California State Coastal Conservancy Strategic Plan” (2007) also provides guidance on the planning and implementation of the Coastal trail, with specific attention to public access. The document was prepared by Coastal Conservancy Staff, and is subject to an annual formal evaluation, and updating within five years.

4.2 Oversight Body

The California Coastal Conservancy is the lead state agency overseeing the planning and development of the Coastal Trail. The Coastal Conservancy is a state agency created to implement the goals of the Coastal Act. The Coastal Conservancy awards grants to public agencies and nonprofit organizations to acquire land or to develop, operate, or manage lands for public access purposes to and along the coast. SB 908 also directed the Coastal Conservancy to provide grants to establish and expand inland trail systems that may be linked to the Coastal Trail. In addition, the Coastal Conservancy works with other state agencies including the Department of Parks and Recreation, the Department of

Transportation (Caltrans), and the Coastal Commission to coordinate development of the California Coastal Trail.

4.3 Advisory Committees

The Coastal Trail does not have a standing formal advisory committee, but Coastwalk, a volunteer organization, assists with advocacy and coordination and public information for the trail. The development of the guiding documents *Completing the California Coastal Trail* and *Strategic Plan* did not include formal advisory committees but Planning and implementation of all specific Coastal Trail projects includes advisory committees and/or other forms of public and agency participation.

4.4 Public Outreach

Public outreach for the Coastal Trail initially occurred through the legislative process, and subsequent public involvement has occurred throughout the life of the project. Each segment of the Coastal Trail is planned and implemented with careful attention to informing and working with local communities. The development of the guiding document *Completing the California Coastal Trail* included public outreach, and recommended project actions included in the report include public outreach. Substantial public outreach and policy guidance for the Coastal Trail occurred during the preparation of the *Strategic Plan*, as well as regular progress reports. Coastwalk has played an ongoing role in facilitating public outreach for the Coastal Trail, including leading educational programs and building public interest.

4.5 Goals and Policies

The California Coastal Trail has six objectives:

1. Provide a continuous trail as close to the ocean as possible, with connections to the shoreline (“vertical access”) at appropriate intervals and sufficient transportation access to encourage public use.
2. Foster cooperation between State, local, and federal public agencies in the planning, design, signing, and implementation of the Coastal Trail.
3. Increase public awareness of the costs and benefits associated with completion of the Coastal Trail.
4. Assure that the location and design of the Coastal Trail is consistent with the policies of the California Coastal Act and local coastal programs, and is respectful of the rights of private landowners.
5. Design the California Coastal Trail to provide a valuable experience for the user by protecting the natural environment and cultural resources while providing public access to beaches, scenic vistas, wildlife viewing areas, recreational or interpretive facilities, and other points of interest.
6. Create linkages to other trail systems and to units of the State Park system, and use the Coastal Trail system to increase accessibility to coastal resources from urban population centers.

The *Strategic Plan* includes three goals for public access, which directly pertain to the Coastal Trail:

1. Develop the Coastal Trail as a major new recreational amenity, tourist attraction, and alternative transportation system, especially in urban areas, and develop networks of inland trails that connect to the coast and parks and provide other recreational opportunities.
2. Develop a system of coastal public accessways, open-space areas, and parks.
3. Revitalize coastal and inland waterfronts.

4.6 Administration, Planning and Operation

Administration

The California Coastal Trail is currently (2010) in its planning process in many counties. The Coastal Conservancy oversees the planning process by providing funding to public agencies and non-profit organizations to plan the trail, acquire land and build facilities.

Planning and Implementation

While the Coastal Commission is tasked with ensuring the selection of a continuous and coordinated trail alignment, individual county planning efforts are overseen by the Coastal Conservancy and planned and implemented by each county and its community.

The Coastal Trail is planned and developed by local jurisdictions with support from the California Coastal Commission, California Department of Parks and Recreation, National Park Service, U.S. Forest Service, Bureau of Land Management, Fish and Wildlife Service, Caltrans, and the California Wildlife Conservation Board. Where feasible, the trail will incorporate existing ocean front trails and paths.

Implementation of new trail segments can be supported by grants from the Coastal Conservancy, however other funding sources are needed to complete the trail.

Operation and Maintenance

Coastal Trail segments are built, owned, managed and maintained by the cities, counties, park districts and other agencies with jurisdiction over the trail segments. Project segments are not prioritized but are built based on funding availability, right-of-way availability/acquisition, and completion of planning, design and environmental review.

4.7 Trail Design

The California Coastal Trail has guidelines for location, size and facility type however they are flexible because sites and circumstances vary along the coast. The guidelines are presented on the following page.

Standard No. 1: Protect the Public and Coastal Resources

Coastal access facilities should be located where they safely accommodate public use. Their distribution should prevent crowding, parking congestion, and misuse of coastal resources. To fulfill this goal, accessway design and location should: a) minimize alteration of natural landforms and be subordinate to the setting's

character; b) prevent unwarranted hazards to the land and public safety; c) ensure the privacy of adjoining residences; and d) protect environmentally sensitive habitats and agricultural areas.

Standard No. 2: Correct Hazards

The management and construction of accessways should correct or at least not increase the potential of any hazard, such as fire or erosion. At times when there is an increased hazard, for example during pesticide application in agricultural areas, the accessway should be closed.

Standard No. 3: Access Easements: Construction and Location

Accessways built on easements, such as offers-to-dedicate, should be no wider than necessary. Width of accessways can vary from a minimum of 30 inches for a trail to 10 feet or wider for ramps or paved walkways, depending on topography and the existing development. Wheelchair access should be provided wherever possible.

Standard No. 4: Privacy

The design and location of accessways should consider the privacy of adjoining residences. Vertical accessways may be fenced or screened with landscaping on the property line and be closed at night, depending on the needs of the adjoining residences.

Standard No. 5: Environmentally Sensitive Areas

Access projects to areas such as wetlands, tidepools, or riparian areas should be evaluated on a case-by-case basis to ensure that the projects: a) are consistent with the policies of Chapter Three of the Coastal Act; b) avoid adverse effects on the resource and, if possible, enhance the resource; c) are reviewed by the Department of Fish and Game and the California Coastal Commission.

Standard No. 6: Lateral Accessway - Construction and Location

A lateral accessway is an area of land that provides the public with access and recreational use along the water's edge.

Lateral accessways should include a minimum of 25 feet of dry sand at all times of the year or the entire sandy area if the beach is less than 25 feet. They should not extend further inland than any shoreline protective structures; nor should they come closer than 10 feet to an existing single-family home. Specifications for construction will vary depending on the Local Coastal Program (LCP) requirements or Commission permit conditions.

Due to the proximity of the ocean and winter storm waves, construction of support facilities on lateral accessways should be kept to a minimum. Retractable ramps or boardwalks, however, not only enable the handicapped to reach the water, but they also can be removed as the seasons dictate.

Standard No. 7 Vertical Accessways - Construction and Location

A vertical is an area of land connecting the first landward public road, trail, or use area with a public beach or lateral accessway, used to get people to the shore. Vertical accessways should be a minimum 10 feet wide.

Urban areas: Vertical accessways in urban areas should be located where streets end at the shoreline, once every six parcels, or up to once every 500 feet. New multiple-family residential projects of five dwelling units or more should provide sufficient space for a vertical accessway and public parking and pay for their construction. Condominium conversions of the same type of units should provide a vertical accessway, either on-site or in the same general area. The existence of public beaches nearby could reduce the number of verticals needed.

Commercial development should incorporate or preserve views of the ocean and vertical access, as well as construct and maintain the accessway as part of the project. Industrial development should provide vertical access and parking improvements according to the extent to which the potential public use is displaced by the facility.

Rural areas: When beachfront parcels are subdivided in rural areas, owners should provide a vertical accessway either as a separate parcel or as an easement over the parcels to be created. More than one vertical accessway may be required if the parcels contain more than one beach area or the beach is ¼ mile or longer. Residential developments should use the standards suggested for urban development.

Vertical accessways in agricultural and timberlands should be wide enough to protect accessway users as well as the crops. At least one accessway should be provided or acquired on such lands if they contain a beach appropriate for safe public use.

Stairways, ramps, trails, over- or underpasses are some of the facilities that can be built on vertical accessways. Drainage systems to prevent erosion may also be necessary.

Standard No. 8: Trails

A trail provides continuous public access either along a coastal bluff or links inland recreational facilities to the shoreline. Specifications for construction will vary according to the LCP.

Trail easements should be a minimum of 25 feet in width. They should never be closer than 10 feet to an existing residence.

Trails should be established on ocean front parcels, depending on the topographic conditions. These trails should connect: a) the shore with inland units of the federal, state, or local park systems; b) access easements; or c) the road with a scenic overlook. Such trails must avoid geologically unstable and erosive soils. Prime agricultural soils should also be avoided except where the trail will not interfere with agricultural production.

Trails can feature steps, footbridges, appropriate paving materials, adequate trail drainage system, trash receptacles, benches, barriers, restrooms, and signs.

Standard No. 9: Scenic Overlooks

A scenic overlook provides the public a unique or unusual view of the coast.

Development of scenic overlooks can vary from a simple roadside turnout with only trashcans, parking, and fencing as appropriate, to a more elaborate roadside rest area. Overlooks that are not next to a road should be accessible by trail, ramps or stairs, and be accessible to those with physical disabilities.

Standard No. 10: Bikeways

Coastal bikeways are paths specifically designated to provide access to and along the coast by nonmotorized bicycle travel as defined in Section 2373 of the Streets and Highway Code.

There are three classes of bikeways:

4.7.1.11 Class I Bikeway – Bike Path

A completely separated right-of-way designated for the exclusive use of bicycles and pedestrians. Minimum surface width of 8 feet for a two-way path and 5 feet for a one-way path and provision for a 2 foot wide graded area adjacent to either edge of the paths.

4.7.1.21 Class II Bikeway – Bike Lane

A Class II bikeway is a right-of-way in the paved areas of highways that is restricted for the use of bicycles. Motor vehicle parking and cross-flows are permitted.

To be classified as a Class II bikeway, the bikeway should be four feet wide on roads in outlying areas where parking is prohibited, 5 feet wide when parallel parking is allowed, or 11 to 13 feet wide when parallel parking is allowed and designated by specific striping.

4.7.1.31 Class III Bikeway – Bike Route

A Class III bikeway is a surface street that is shared with pedestrians or motorists. These routes are used primarily to provide a continuous link between Class I and II bikeways.

All classes of bikeways must feature a graded and paved path, bike racks, vehicle barriers, fencing, and signs. On a Class II and III, signs and striping are required.

Standard No. 11: Hostels

Hostels are low-cost public travel accommodations that provide sleeping, kitchen, and bath facilities for traveling families, groups, and individuals of all ages. Following the example of the hostels in Europe, which generally allow a maximum stay of three nights, California coastal hostels combine low-cost lodging with educational, social, and cultural opportunities.

Hostels should have sufficient space for a minimum of 24 people, and one parking space for every eight guests and each residential staff person. Existing buildings, such as lighthouse stations, preferably on public or parkland, should be used for hostel sites whenever renovation is economically feasible and the structures are appropriate to current surrounding land use.

Ideally, hostels should be located at intervals of 20 to 40 miles, on or near the coast, and within two miles of recreational trails. If more than five miles of normal bicycle travel is required to get from one campground or hostel to another then campgrounds should be used to provide lodging.

Hostels should feature beds, kitchens, and bathrooms mentioned above as well as public telephones, location signing along highways, and public transit stops.

Standard No. 12: Support Facilities

Support facilities are structures that make it easier for people to use and maintain coastal accessways: signs, trash receptacles, public telephones, restrooms, showers, bike security racks, public transit loading and unloading areas, campgrounds, and parking areas fit into this category. The support facilities that each accessway will require should be decided on a case-by-case bases. Directional and resource interpretation signs are available from the Coastal Conservancy.

Standard No. 13: Barrier-Free Access

All accessways must be made wheelchair-accessible unless this would present an unreasonable hardship. Grounds for an unreasonable hardship are to be determined by the enforcement agency for the region.

Accessways that accommodate or plan to accommodate those with mobility problems are the highest priority for State funding. The standards for these accessways and their support facilities should at least meet, if not exceed, the requirements of Title 24 of the California Administrative Code.



5. Carolina Thread Trail

North and South Carolina

The Carolina Thread Trail (Thread Trail) began as a visioning process in 2005. It will be a regional trail network extending over 15 counties serving over 2 million people once completed. Its vision is to preserve, protect and connect open spaces through a 500+ mile ribbon of parks, trails and conservation corridors. Seven Carolina counties have adopted master plans with the identified Thread Trail planning area, twelve corridors are under development (Spring 2010) and eleven communities have marked trail on the ground.

The Thread Trail is included in this review of best practices because of its multi-jurisdictional nature and design vision to reflect each community's needs.

5.1 Planning and Guiding Documents

The Thread Trail has been adopted in the following seven of the fifteen counties in the planning area:

1. Cabarrus County, NC
2. Chester County, SC
3. Cleveland County, NC
4. Gaston County, NC
5. Lincoln County NC
6. Mecklenburg, NC
7. Stanly County, NC

Each of these counties has developed and adopted their own Thread Trail Master Plan.

5.2 Oversight Body

While there is no state or regional governing body serving as an oversight body for the trail planning, the non-profit Carolina Thread Trail oversees the project. They have contracted with Catawba Lands Conservancy to manage the project.

5.3 Advisory Committees

Steering Committee

Each county has a steering committee during the development of their Thread Trail Master Plan. Members are either self-selected or appointed by the County Board of Commissioners.

Leadership Council

The Thread Trail leadership council serves as the project advisory committee. The council is made up of 17 community, civic and corporate leaders. Each member is recruited by the Catawba Lands Conservancy.

Advisory Council

The Advisory Council is a 17 member group representing planning and community development departments as well as land trusts. This council is appointed by the Catawba Lands Conservancy and provides technical guidance to the Thread Trail staff. Represented organizations and agencies include:

1. Anson County Planning Department
2. York County Planning and Development Department
3. Mecklenburg Count Green Services Department
4. Stanly County Recreation Resources Department
5. Gaston County Cooperative Extension Department
6. Catawba County Planning Department
7. Lincoln Parks and Recreation Department
8. Katawba Valley Land Trust
9. Concord Parks and Recreation Department
10. City of Gastonia Planning Department
11. Cleveland County Planning Department
12. University of North Carolina – Charlotte Urban Institute
13. City of Salisbury Land Management and Development Department
14. Catawba Regional Council of Governments
15. Centralina Council of Governments
16. Iredell County Planning Department
17. Nation Ford Land Trust

5.4 Public Outreach

Community outreach is conducted when individual counties develop their own Thread Trail Master Plan. The Thread Trail has two community coordinator staff who facilitate public outreach. Outreach strategies include public meetings, presentations to community groups and an informative website. The project website includes information on the trail, updates on each county's efforts, and an interactive map.

5.5 Goals and Policies

The Thread Trail is guided by five core principles and a project vision. The five core principles include:

1. Invitation to communities
2. Active listening
3. Communities self-determine trail locations
4. Bias towards action
5. Respect for land; respect for land ownership.

The vision for the Thread Trail is:

“to preserve, protect and connect open spaces through a 500+ mile ‘green ribbon’ of parks, trails and conservation corridors, touching 2.3 million people in our region. The Thread will protect natural areas and wildlife habitat, will increase recreational and educational opportunities, and promote healthy communities and lifestyles. Freely accessible to all, the Thread will increase access to nature, parks and area attractions. It will improve our quality of life and attract tourism and business. The Carolina Thread Trail is a tangible project around which local communities and governments are rallying to protect natural resources, connect people with nature, and connect our region.”

5.6 Administration, Planning and Operation

Administration

The Thread Trail is currently (2010) in its planning process. Two leading land conservation organizations are involved in advancing the trail in partnership with local land trusts and community partners. Catawba Lands Conservancy is the lead agency for the project, while The Trust for Public Land, serves as a key consultant. Other partners include the Foundation For The Carolinas that provides philanthropic assistance, and Duke Energy that contributes cash, land and in-kind services. The Carolina Thread Trail has four full-time staff members.

Planning and Implementation

The individual county planning efforts are overseen by the Thread Trail staff but planned and implemented by each county and its community.

The Thread Trail is being planned and developed by local jurisdictions with support of Thread Trail staff and partners and through a four-step grants program. The Thread Trail Grants Committee oversees the grants process and makes recommendations to the Governing Board on grant applications. Grants for county-wide greenway master plans (Planning Grants) are approved on a rolling basis as communities apply. Grants for design, acquisition and construction (Implementation Grants) are awarded on an annual cycle. While Implementation Grants will not be available for all segments of the Thread Trail, they will provide catalytic funding to get priority segments on the ground.

Communities, working together, may apply for grants from the private pool of capital that can serve as local match funding for state and federal grant programs. Each community will decide where its local trail systems will connect, thus becoming part of the Thread Trail. The Thread Trail is planned, built and owned by the

communities. Planning guidelines encourage routing the Thread Trail across public land or rights-of-way or using land or rights of way acquired from willing landowners.

5.7 Design

The Thread Trail will be a network trail system through 15 counties. It will focus on corridors that provide connecting legs of a regional trail system. There are no design standards for the Thread Trail, instead each community determines the type of trail for their jurisdiction.



6. Monterey Bay Sanctuary Scenic Trail

Monterey and Santa Cruz Counties, CA

The Monterey Bay Sanctuary Scenic Trail will be a bicycle and pedestrian path along the coast of the Monterey Bay National Marine Sanctuary from Pacific Grove to the Santa Cruz/San Mateo County line. It will be part of the California Coastal Trail.

The Monterey Bay Sanctuary Scenic Trail is included in this review of best practices because of its proximity to water and active agricultural activities.

6.1 Planning and Guiding Documents

The Monterey Bay Sanctuary Scenic Trail is guided by the Monterey Bay Sanctuary Scenic Trail Master Plan (2008). Santa Cruz County is currently developing a comprehensive master plan for their county.

6.2 Oversight Body

The Monterey Bay Sanctuary Scenic Trail implementation is overseen by the respective transportation management agencies in the two counties: the Transportation Authority of Monterey County and the Santa Cruz County Regional Transportation Commission.

6.3 Advisory Committees

Steering Committee

A steering committee was created by the Association of Monterey Bay Area Governments (AMBAG) to gather technical input from State, regional and local agencies with direct knowledge of the corridor. The committee included representatives from the following organizations and agencies:

1. Agricultural representative
2. Santa Cruz County Regional Transportation Commission Bicycle Committee
3. Transportation Agency for Monterey County Bicycle/Pedestrian Committee

4. California Coastal Conservancy
5. Santa Cruz Port District
6. City of Watsonville
7. California State Parks Monterey County
8. City of Capitola
9. Moss Landing Harbor District
10. Monterey County Peninsula Regional Park District
11. City of Pacific Grove
12. Monterey County Department of Public Works
13. City of San City
14. Caltrans District 5
15. California Coastal Commission
16. Santa Cruz County
17. California State Parks Santa Cruz County
18. Santa Cruz Regional Transportation Commission

Technical Advisory Committees

A technical advisory committee (TAC) oversaw the development of the trail master plan, however the group no longer meets. The TAC included representatives from:

1. Congressman Sam Farr's office
2. Association of Monterey Bay Area Governments
3. Santa Cruz County Regional Transportation Commission

6.4 Public Outreach

Public outreach for the Monterey Bay Sanctuary Scenic Trail Master Plan (2008) included individual meetings with key property owners and stakeholders along the identified corridor and several public meetings and design workshops.

6.5 Goals and Objectives

The Monterey Bay Sanctuary Scenic Trail Master Plan (2008) has five goals.

Goal 1: Trail System Development

Provide a continuous public trail along the shoreline of Monterey Bay National Marine Sanctuary, without harming sensitive resources.

Objective 1.1: Define a continuous trail alignment that maximizes opportunities for a multi-use trail separate from roadway vehicle traffic where feasible.

Objective 1.2: Make the trail functional as a transportation facility.

Objective 1.3: Make the trail recognizable as a continuous facility.

Objective 1.4: Minimize the environmental impacts of the complete trail system.

Objective 1.5: Minimize trail impacts to private lands including agricultural, residential and other land uses.

Goal 2: Enhance Appreciation of the Coastal Environment

Develop public trail access along the Monterey Bay National Marine Sanctuary to enhance appreciation, understanding and protection of this special resource.

Objective 2.1: Define interpretive guidelines and exhibits to address ecological, historical, and agricultural working landscapes.

Goal 3: Education and Awareness

Promote awareness of the trail, trail opportunities, and trail user responsibilities.

Objective 3.1: Promote the benefits of trail usage such as economic, transportation, safety, connectivity, community image and health.

Goal 4: Implementation

Develop a long- and short-term program to achieve the policies set forth in this plan through a combination of public and private funding, regulatory methods, and other strategies.

Objective 4.1: Define costs associated with each defined segment and for overall improvements required to create a continuous trail.

Objective 4.2: Ensure that sponsors of the Monterey Bay Sanctuary Scenic Trail pursue all potential State, Federal, and other funding sources.

Objective 4.3: Utilize bond issues or other funding mechanisms as necessary to fund development of parks as allowed by the Mello-Roos Community Facilities Act, Quimby Act, or other legislation.

Objective 4.4: Utilize ordinances and park conservation or trail easements to ensure significant trail development opportunities.

Objective 4.5: Utilize existing lands owned by various government entities, open space groups, institutions and other sources to acquire and develop the trail.

Objective 4.6: Support the establishment of a “Friends of the Monterey Bay Sanctuary Scenic Trail” organization to provide and seek financial and other support for the trail.

Objective 4.7: Maximize funding for the project.

Goal 5: Operation and Maintenance

Develop the necessary organizational staffing and funding mechanisms to ensure that all trail segments, trailheads, and accessory features are safe, well-maintained, and well managed.

Objective 5.1: Consider establishing a shared maintenance agreement between local, county and State agencies with ownership and management responsibility for individual trail segments.

Objective 5.2: Ensure adequate revenue for the maintenance of all trail segments and related facilities.

Objective 5.3: Provide for secure, safe sanctuary and pleasant use of trail facilities.

6.6 Administration, Planning and Operation

Administration

The Transportation Agency for Monterey County is the lead agency for the project in Monterey County. The Santa Cruz County Regional Transportation Commission is the lead agency for the project in Santa Cruz County.

Planning and Implementation

Partnerships were developed to facilitate planning and coordination for the Monterey County Plan. Planning, coordination and technical assistance was provided by the Association of Monterey Bay Area Governments (AMBAG), the Rivers, Trails and Conservation Assistance Program of the National Parks Service, the Monterey Bay National Marine Sanctuary, the California Coastal Commission, and the office of Congressional Representative Sam Farr.

Project planning in Monterey County is currently managed by one full time staff person.

Operation and Maintenance

Operation and maintenance of the trail will be provided by the local agency.

6.7 Design

The Monterey Bay Sanctuary Scenic Trail includes a variety of trail types in order to be sensitive to the many environments the trail will pass through. The plan includes a trail type matrix and is shown below in Table D-1.

Table D-1: Monterey Bay Sanctuary Scenic Trail Design Guidelines

Category	Description	Construction	Active Dune			Agricultural Field Edge	Road Edge	Levees	Possible uses
			Beach side	Crest	Inland side				
Recreational Trail Type A	Unpaved narrow trail	Earth	No	Yes	Yes	No	No	No	Walking, horse-riding
Recreational Trail Type B	Unpaved wide trail or unpaved road	Earth, polymer stabilized earth	No	No	Yes	Yes	Yes	Yes	Walking, horse-riding, biking
Recreational	Elevated	Wood	Yes	Yes	Yes	No	No	No	Walking

Category	Description	Construction	Active Dune			Agricultural Field Edge	Road Edge	Levees	Possible uses
			Beach side	Crest	Inland side				
Trail Type C	boardwalk								
Recreational Trail Type D	At grade boardwalk	Wood	Yes	Yes	Yes	No	No	No	Walking
Class-I Bike Path	Separated bike path	Asphalt	No	No	No	Yes	Yes	Yes	Biking, Walking
Class-II Bike Lane	Marked bike lane	Asphalt	No	No	No	No	No	No	Biking
Class-III Bike Route	Sign-posted, wide curb lanes and/or shoulders	Asphalt	No	No	No	No	No	No	Biking

6.8 Trail and Agriculture

The Monterey Bay Sanctuary Scenic Trail Master Plan addressing specific concerns and potential solutions regarding the compatibility of trails and agriculture. The following is an excerpt from the Plan.

Potential Benefits to Trail Users

Among the primary objectives of the Monterey Bay Sanctuary Scenic Trail is to “define interpretive guidelines and exhibits to address ecological, historical, and agricultural working landscapes.” Fulfillment of this objective will result in educational efforts focused on the appreciation of working agricultural landscapes. The more trail users are able to make the connection between their enjoyment of the physical beauty of the agricultural landscape and the importance of purchasing locally produced farm products, the greater the willingness of trail users will be to purchase farm products and conserve farmland. A June 2001 poll of registered voters found that 70 percent of respondents had bought something in the last year from a farmer or farmers market.¹ The potential for trail users to become devoted patrons of local agriculture increases with the opportunity to market these products to them as they ride past fertile fields while using the proposed Monterey Bay Sanctuary Scenic Trail.

Potential Benefits to Agricultural Landowners

The alignment of trails at the edge of productive agricultural land can result in several desirable outcomes, including trails as buffers, educational benefits and economic benefits. First, the trail or open space provides a buffer between the agricultural operation and more densely populated residential areas. This buffer can help

¹ Esseks, J. Dixon, et. al., “Estimating the Income, Environmental and Social Benefits of Agricultural Conservation Easements from the Perspective of Local Stakeholders” in *Compensating Landowners for Conserving Agricultural Land* (University of California, Agricultural Issues Center, 2003).

to reduce edge conflicts by ensuring that residential subdivisions and productive agricultural lands do not share a common fence line. Secondly, the presence of the trail along agricultural acreage provides educational opportunities for non-farm residents who may otherwise have limited exposure to agricultural operations. This exposure to agricultural production may facilitate community and political support for agricultural land preservation initiatives, as residents realize the important role that agriculture plays in their lives and in the life of their community. Finally, the construction of a trail abutting agricultural land presents opportunities for the landowner to reap an economic benefit if they decide to donate or sell land or an easement to a public agency or non-profit organization. As efforts to determine the preferred alignment for the Monterey Bay Sanctuary Scenic Trail continue, opportunities for discussion of possible profits to landowners from the sale of land, easements, or from preferential taxation may arise.

Included in the Goals and Objectives of the Monterey Bay Sanctuary Scenic Trail Master Plan is the policy directive to “recognize that acquisition can be more flexible, more creative and less expensive than fee simple acquisition; explore property transfers, trades, donations, partial purchases, joint purchases, easements, long-term leases, encroachment permits, and a variety of other legal means from willing sellers or property owners.” This directive briefly outlines some of the options available for the procurement of access to the trail corridor as it runs through or along private property boundaries. Agricultural landowners may particularly benefit from fee-simple acquisition, which may provide a significant amount of money in exchange for the sale of the parcel. However, for landowners who wish to retain ownership for the property, there are additional opportunities for smaller financial gains, including: The sale of an easement may provide suitable compensation for public access in the form of a one-time payment. Alternately, the donation of an easement may simply provide reduced property taxes, which may be an attractive offer to landowners with smaller agricultural operations. Similarly, long-term leases may provide incremental payments to landowners in exchange for the use of their land.

Liability and Safety

Agricultural landowners in California who own land over which a trail passes are protected by the State’s Recreational Use Statute (RUS). This statute, California Civil Code § 846 was enacted to encourage private landowners to allow recreational public use of their land without the risk of liability. The Statute provides immunity from liability for injuries sustained by individuals using their land for recreational purposes without fee payment. Over the thirty-year period that the Statute has been in place, the judgments handed down by the California Courts have predominantly upheld the purpose of the Statute. A review of the Recreational Use Statute and the case law pertaining to the Statute is attached to this document.

Spraying

Mitigation for farming practices such as spraying can be adapted to trail users by providing adequate warning to the users about the risks they assume. For example, in order to prevent nuisance claims triggered by the spraying of pesticides, warning signs and a spraying schedule may be posted at trailheads and along the trail to notify trail users of the risks associated with trail use. Case law pertaining to the Recreational Use Statute has upheld the presence of warning signs through a finding that warning signs are sufficient to show the absence of willful or malicious conduct on the part of the landowner.²

² California Recreational Use Statute and Liability Handbook (Bay Area Ridge Trail Council, 1998).

Trespassing

Appropriate trail design can mitigate liability presented by trespassing. The installation of fences along the trail is an integral part of the defense against liability as it prevents trail users from making attractive nuisance claims. An attractive nuisance claim hinges on the tacit “invitation” of children onto the property by a nuisance, such as livestock, that is attractive to children.³ The construction of a fence, which bars children from entry and warns against the nuisance, is a defensible precaution against attractive nuisance claims. The installation of a fence clearly demarcates the boundary between private, productive agricultural land and the trail facility.

Theft

The theft of produce from the public is perceived as a potential problem. Many citrus and other operations are open to theft from anyone driving along a field, most of which are not fenced. Thefts perpetrated via truck can have a major impact on a farm’s economic viability; however, large-scale theft, is not likely to occur on trails. While no one tool is effective at addressing this problem, many areas have dealt with this issue by adopting stiff penalties for theft. Signage should be posted along roadways warning of the risk of penalty, in order to deter theft. This has helped control casual theft by the general public. Trails that are not accessible to vehicles and are posted with ‘no trespassing’ signs, fencing, and patrols are not likely to suffer significant theft, especially compared to public roads where trucks can directly access fields.

Impacts to Agricultural Operations

Trail design can encourage safe trail use practices and provide a diminished risk of injury, thus reducing the risk of liability claims. Some of the most significant design features along a trail are inherent in the alignment itself. The distance the trail is setback from agricultural land results in important allowances for typical farm practices. For example, providing room at the end of a row for farm equipment to turn around without nearing the trail prevents trail users from feeling endangered by farming practices.

Loss of Land

The implementation of new trails in agricultural areas may take land out of operation by limiting access. Any trail proposal that includes limiting access should be carefully evaluated and used only as a last resort. The Monterey Bay Sanctuary Scenic Trail has as one of its primary goals the protection of agricultural lands, and every effort is being made to minimize or eliminate this impact.

³ McEowen, Roger A. “Recreational Use of Private Lands: Associated Legal Issues and Concerns” (The National Agricultural Law Center, 2003).



7. Santa Paula Branch Line Recreational Trail

Ventura County, CA

The Santa Paula Branch Line Recreational Trail is a proposed rail with trail along the Santa Paul Railroad Branch line between San Buenaventura and the Historic Rancho Camulos in Piru. The 32-mile right-of-way is owned by the Ventura County Transportation Commission.

This trail is included in this review of best practices because of its proximity to active agricultural activities.

7.1 Planning and Guiding Documents

The Santa Paula Branch Line Recreational Trail is guided by the Santa Paula Branch Line Recreational Trail Plan (1999).

7.2 Oversight Body

The Santa Paul Branch Line Recreational Trail is overseen by the Ventura County Transportation Commission (VCTC) as the lead agency, in partnership with the County of Ventura and the incorporated cities of Fillmore, Santa Paula and San Buenaventura through a Memorandum of Understanding (MOU).

7.3 Advisory Committee

During the development of the Master Plan, an advisory committee participated in the development of policies that guided the plan. The committee also acted as public liaisons to maximize public outreach. Organizations represented included:

1. Agricultural property owners (4 members)
2. Bicycle groups
3. City of San Buenaventura
4. Fillmore and Western Rail Company
5. City of Santa Paula
6. City of Fillmore
7. Santa Paul Historical Society
8. City of Santa Clarita
9. Valley Advisory Committee

10. Ventura County Farm Bureau
11. District 3 County Supervisor
12. Santa Clara Schools
13. Agricultural Commission
14. Rancho Camulos Mission
15. City of Santa Paula

The advisory committee formed an Agricultural Subcommittee to address the concerns of the agricultural community.

7.4 Public Outreach

Public outreach for the Santa Paula Branch Line Recreational Trail included individual meetings, newsletters, informational letters, Advisory Committee meetings, Agricultural Subcommittee meetings, and two public workshops.

7.5 Goals and Objectives

The Santa Paula Branch Line Recreational Trail Master Plan (1999) has 14 goals:

- Locate the Trail, wherever possible, within the railroad ROW to organize and manage trail use in the corridor and to provide an alternative to using heavily traveled parallel roadways.
- Provide for a functional facility that serves major and minor destinations, provides a relatively direct west-east connection in the County, and follows routes already used by bicyclists, pedestrians, and others.
- Design and plan for a Trail that will serve both commuter and recreational needs (a Class I bikeway).
- Design and plan for a Trail that will be feasible to implement by considering budget constraints and maximizing the trail's funding potential.
- Build upon and connect to existing and planned trails wherever possible.
- Maximize user safety along the railroad through design and operation techniques.
- Minimize impacts to adjacent property owners by appropriate design and operation of the facility, including fencing, landscaping, and other appropriate improvements.
- Minimize disruption to agricultural operations and properties adjacent to the trail corridor.
- Preserve the ability to provide continued tourist train services and expand commuter rail service in the future.
- Design grade crossings at roadways to maximize trail user safety and maximize convenience, while minimizing negative impacts to traffic capacity.
- Design the facility to meet state and federal standards, including the Americans with Disabilities Act.
- Protect and minimize conflict with environmentally sensitive habitats along the ROW.
- Integrate cultural, historical and educational elements into the trail design.

- Avoid new railroad grade crossings. Utilize existing roadway crossings as much as possible. Construct new grade-separated crossings where needed.

7.6 Administration, Planning and Operation

The Ventura County Transportation Commission (VCTC) was the lead agency on the development of the Master Plan. The VCTC, the County of Ventura and the three (3) incorporated cities (Fillmore, Santa Paula and San Buenaventura) have a MOU (Memorandum of Understanding) identifying a bicycle path as a potential use of the right-of-way and addresses finances, administrative structure, maintenance, encroachment permits, leases, license and easements.

Operation and maintenance will be performed by each jurisdiction respective of the trail segments in their communities.

7.7 Trail Design

The Santa Paula Branch Line Recreational Trail Master Plan travels through areas with distinctive characteristics, including urban areas and rural agricultural areas and separate trail design features are presented for both environments. However, specific design guidelines are not presented. Instead, it is recommended each trail segment adhere to the standards of its respective jurisdiction.

7.8 Trail and Agriculture

The Santa Paul Plan includes specific discussion about trail and agriculture compatibility concerns. The plan outlines specific mitigation measures to address potential problems. The related measures are presented below.

Intelligent Transportation Technology (ITT)

- Surveillance cameras and monitoring of activities along the Trail corridor through advances in transportation technology systems will provide for around the clock monitoring.
- Video Cameras and related detection zones will enable Trail manager and/or law enforcement personnel to document and monitor trail activity and shorten safety response times.
- Video and motion detectors linked to automated gates installed at authorized private at-grade crossing will maintain ease in movement for farm equipment and related agricultural circulation needs.
- Automated information kiosks located at staging and rest areas and at Trail entrance points will alert riders of trail closures and relevant safety information related to agriculture operations. Electronic signs will be located at key segments allowing users to be notified of Trail conditions and closures.

Dedicated Security Patrol

- Security personnel will be provided to patrol the Trail as necessary. Security will likely be higher during peak period weekends, spring and summer.
- Portions of the Trail visible from adjacent or nearby streets will have the added security of the local City and County police.

Mile-Post Mapping

- Mile-posts will be installed at minimum of every one mile, with corresponding maps distributed to all jurisdictions to promote timelier response.
- All emergency response personnel will be equipped with maps of access points and gates.

Emergency Call Boxes

- Solar powered emergency phones will be installed on an as needed basis.

Notice Posting

- All trail entrances/crossings will be posted with notices that the trail is adjacent to private property where there are active agricultural operations. Trail users will be advised to stay on the trail and what the ramifications are for trespassing or being on the trail after it is closed.
- Trail users will be advised to be alert to operating machinery and equipment crossing the trails.
- Trail users will be advised that farm operations may include pesticide spraying and burning activities in accordance with State and Local laws/ordinances and that portions of the trail may be closed without notice. Users will be warned that use of the train is at their own risk.

Citation Program Established

- The VCTC will introduce new County-wide legislation that would enable patrol-personnel to issue citations to any persons trespassing on private property. Citation fines are to best at a rate high enough to act as a deterrent (e.g. in Florida the fine is \$1,000).
- If new Count-wide legislation is adopted security personnel will have the authority to issue citations and or arrest trespassers.

Liability and Insurance (Draft Trail Agreement for Legal Defense Claims)

- The VCTC will make the terms of the Trail Agreement available to all adjacent agricultural property owners.
- Under the terms of the Trail Agreement, the VCTC will provide the legal defense for an adjacent property owner when the terms of the agreement apply.

Pesticide Spraying (Notices Posted)

- All Trail entrances will be posted with notices of on-going agricultural activities and stating that the Trail user agrees to using the Trail at his/her own risk.
- Notices will state that the Trail is subject to closure without notice to accommodate such activities.

Pesticide Spraying (Ability for Trail Closures)

- The Trail will be designed with the ability for its physical closure (of isolated segments) in the event it becomes necessary to facilitate permitted spraying.
- The Trail manager will be responsible for closures when appropriate.

Burn Activity (Notices Posted)

- All Trail entrances will be posted with notices of on-going agricultural activities and stating that the Trail user agrees to using the Trail at his/her own risk.
- Notices will state that the Trail is subject to closure without notice to accommodate such activities.

Burn Activity (Notices Posted)

- During peak burn times, the Trail manager will check burn day status and initiate closure of the affected segments of the trail.

Continued Use of VCTC Right-of-Way/Equipment Access

- Use of Right-of-Way: Currently there are many encroachments into the VCTC right-of-way. It is the objective of VCTC to allow continued use of excess ROW for agricultural use by an adjacent property owner subject to the needs of specific trail alignments, design and other individual site conditions. All use of adjacent VCTC ROW will be mutually agreed upon by VCTC and adjacent property owners on a case by case basis.
- Installation of gates: In consultation with and upon approval by provide crossing lease holders gates will be designed and placed at existing authorized private at-grade crossing.



8. San Francisco Bay Trail

San Francisco Bay Area, CA

The San Francisco Bay Trail is a visionary plan for a shared use path that will one day allow continuous travel around San Francisco Bay. Currently, over 300 miles of trail have been completed. Eventually, the Bay Trail will extend over 500 miles to link the shoreline of nine counties, passing through 47 cities and crossing seven toll bridges.

8.1 Planning and Guiding Documents

The Bay Trail is guided by the document: *The Bay Trail: Planning for a Recreational Ring Around San Francisco Bay* (1989).

8.2 Oversight Body

The Bay Trail is overseen by the Association of Bay Area Governments (ABAG) and a 28-member volunteer Board of Directors. The Board of Directors meets twice a year and members include representatives from the following organizations:

1. Trails for Richmond Action Committee
2. Sonoma County Regional Parks
3. Metropolitan Transportation Commission
4. Trail advocates
5. Santa Clara County Parks and Recreation
6. Caltrans
7. Santa Clara County Open Space Authority
8. San Mateo County Parks Department
9. Port of San Francisco
10. Hayward Area Recreation and Park District
11. Bay Planning Coalition
12. Save the Bay
13. City of Palo Alto, Transportation Division
14. Marin County Park and Open Space Commission
15. City of San Francisco, Attorney's Office
16. LSA Associates
17. Cargill Salt
18. Former Mayor, City of Sunnyvale

19. San José Parks, Recreation and Neighborhood Services
20. East Bay Bicycle Coalition
21. Pacific Gas and Electric Company
22. Midpeninsula Regional Open Space District
23. Solano Transportation Authority
24. Napa County Conservation Development and Planning Department

8.3 Advisory Committees

Steering Committee

The Bay Trail Steering Committee is a nine-member sub-committee of the Board of Directors. This committee meets bimonthly and provides ABAG staff with direction and feedback on trail alignment and implementation. Represented organizations include:

1. East Bay Regional Parks District
2. County of San Mateo
3. East Bay Bicycle Coalition
4. League of Woman Voters
5. Bay Conservation and Development Commission
6. State Coastal Conservancy
7. Trail Advocate

8.4 Public Outreach

Public outreach is coordinated by local jurisdictions. ABAG staff provide merchandise and maps and also oversee the project website but rely on local partners to facilitate outreach efforts.

8.5 Goals and Policies

The Bay Trail Plan also contains policies to guide selections of the trail route and implementation of the trail system. Policies fall into five categories.

Trail alignment policies reflect the goals of the Bay Trail program—to develop a continuous trail which highlights the wide variety of recreational and interpretive experiences offered by the diverse bay environment and is situated as close as feasible to the shoreline, within the constraints defined by other policies of the plan.

Trail design policies underscore the importance of creating a trail which is accessible to the widest possible range of trail users and which is designed to respect the natural or built environments through which it passes. Minimum design guidelines for trail development are recommended for application by implementing agencies.

Environmental protection policies underscore the importance of the San Francisco Bay's natural environment and define the relationship of the proposed trail to sensitive natural environments such as wetlands.

Transportation access policies reflect the need for bicycle and pedestrian access on Bay Area toll bridges, in order to create a continuous trail and to permit cross-bay connections as alternative trail routes.

Implementation policies define a structure for successful implementation of the Bay Trail, including mechanisms for continuing trail advocacy, oversight and management.

The Bay Trail program goals are reflected in the trail alignment policies:

1. Ensure a feasible, continuous trail around the Bay.
2. Minimize impacts on and conflicts with sensitive environments.
3. Locate trail, where feasible, close to the shoreline.
4. Provide a wide variety of views along the Bay and recognize exceptional landscapes.
5. Investigate water trails as an enhancement to the trail system where necessary or appropriate.
6. In selecting a route for the trail, incorporate local agency alignments where shoreline trail routes have been approved. Incorporate San Francisco Bay Conservation and Development Commission public access trails where they have been required.
7. Where feasible and consistent with other policies of this plan, new trail may be routed along existing levees.
8. Where existing trails through wetlands are well-maintained and well-managed, the Bay Trail can feasibly be routed there. In these cases, trails should be used according to current regulations. Alternate routes should be provided where necessary and additional buffering/transition areas designed to protect wetland habitats should be provided where appropriate to protect wildlife.
9. In selecting a trail alignment, use existing stream, creek, slough and river crossings where they are available. This may require bridge widening in some locations. In selecting trail alignments, new stream, creek and slough crossings should be discouraged. Where necessary because acceptable alternatives do not exist, bridging may be considered.
10. In order to minimize the use of existing staging areas along the shoreline and to reduce the need for additional staging areas, the choice of trail alignment should take full advantage of available transit, including rail service (e.g., Caltrain, BART), ferries and bus service.
11. Connections to other local and regional trail and bikeway systems should be actively sought in order to provide alternatives to automobile access to the Bay Trail. In particular, opportunities should be explored for trail connections to the Bay Area Ridge Trail, which is envisioned to circle the Bay along the region's ridgelines.

8.6 Administration, Implementation and Operation

Administration and Planning

ABAG oversaw the development of the trail plan. Figure 1 outlines the project structure envisioned in the plan. In 1990, the San Francisco Bay Trail Project, a nonprofit housed within ABAG offices, is dedicated to planning, promoting and advocating implementation of the Bay Trail. The Bay Trail Project provides grants for trail planning and construction; participates in planning efforts and encourages consistency with the

adopted Plan; educates the public and decision makers about the merits and benefits of the trail; produces maps and other publicity materials; and advertises progress on trail development.

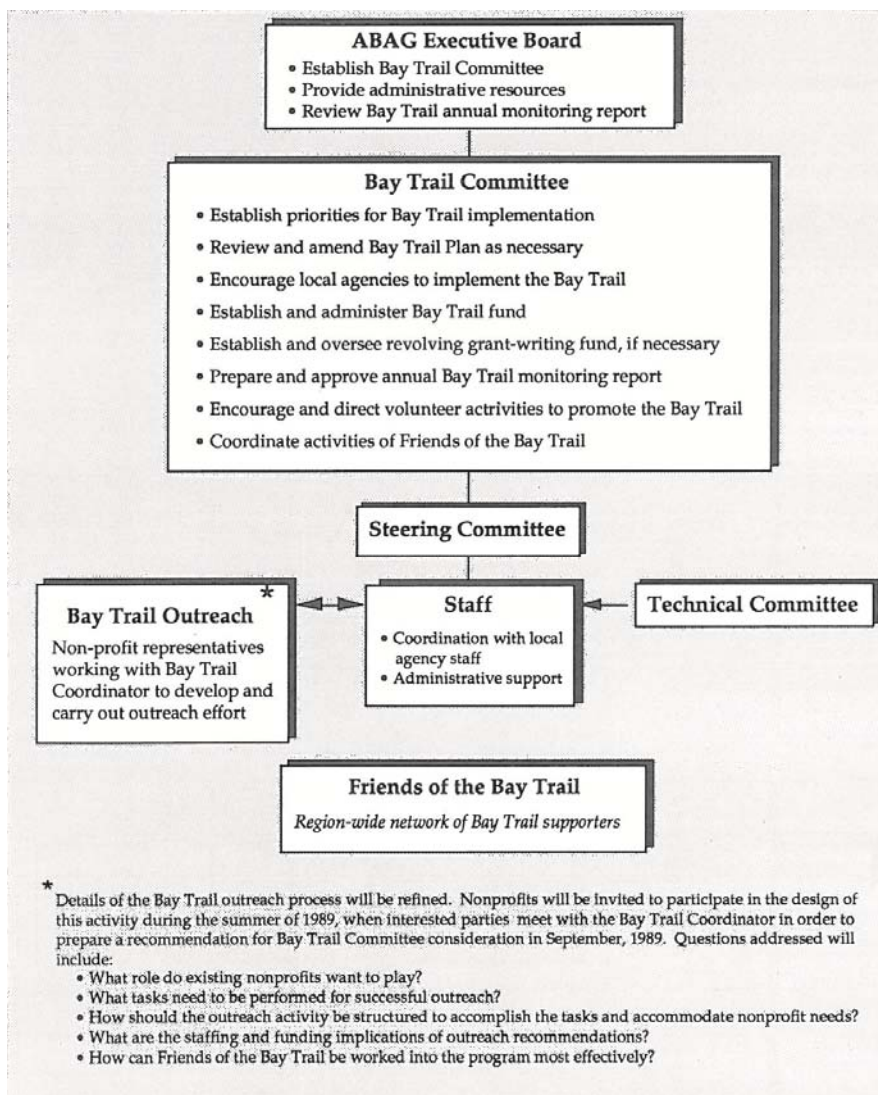


Figure D-1: Bay Trail Project Structure

*Source: ABAG's Bay Trail: Planning for a Recreational Ring around San Francisco Bay, 1989

Implementation and Operation

Bay Trail segments are built, owned, managed and maintained by the cities, counties, park districts and other agencies with jurisdiction over the trail segments. Project segments are not prioritized but are built based on funding availability, right-of-way availability/acquisition, and completion of planning, design and environmental review.

8.7 Design

The San Francisco Bay Trail includes a variety of trail types in order to be sensitive to the many environments the trail will pass through. The plan includes a trail type matrix and is shown below.

Table D-2: San Francisco Bay Trail Design Guidelines

Item	High-Use Facilities	Multi-Use Paths	Bicycle-Only Paths	Hiking-Only Paths	Natural Trails
Minimum Width (one-way)	8-10'	10'	8'	5'	3-5' (minimum widths less than 5' will be required to have 5'x5' turnouts at intervals to meet accessibility standards)
Minimum Width (two way)	10-12'	10-12'	10-12'	8-10'	5'
Surface	Asphalt (high use pedestrian path could be other hardened surface).	Asphalt	Asphalt	Hardened	Natural/ Boardwalks (natural surfaces may require surface hardening to provide accessibility)
Horizontal Clearance (incl. shoulder)	12-16'	14-16'	10'	9-12'	7-9'
Shoulder (area specified is on both sides of the trail)	2'	2'	2'	2'	Unspecified
Vertical Clearance	10'	10'	10'	10'	Unspecified
Cross Slope	2% maximum	2% maximum	2% maximum	2% maximum	Unspecified
Maximum Grades (percentage grade for short distances with flat rest areas at turn outs, except where site conditions require a greater slope for short distance)	5%	5%	5%	5%	Unspecified

Appendix E.

Funding Opportunities Matrix

This appendix provides detail on the funding sources identified in **Chapter 10**, including contact information, application deadline, annual funding levels, matching requirements and eligible applicants and projects. It also identifies philanthropic and private sector sources of support, including local corporations and businesses in bicycling and outdoor recreation industries that have historically provided financial support for local projects and programs.

This funding matrix was prepared as a component of the Great California Delta Trail Blueprint Report by the Rivers, Trails and Conservation Assistance Program of the National Park Service with cooperation from the Delta Protection Commission and Alta Planning and Design.

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	Due Date	Agency	Annual Total	Matching Requirements	Eligible Applicants	Eligible Projects	Comments	Website
FEDERALLY-ADMINISTERED FUNDING								
Federal Lands Highway Funds	July	Federal Highway Administration	\$4.5 billion nationwide from FY 2005 to FY 2009.	None	Local governments, Caltrans, Bureau of Land Management and the National Trail System Program.	Transportation projects (including pedestrian and bicycle facilities) that are within provide access to or are adjacent to Federal and Indian lands.	Program is administered through partnerships and interagency agreements between FHWA's Office of Federal Lands Highway and FLMA's and Tribal customers.	http://flh.fhwa.dot.gov/programs/
Transportation, Community and System Preservation (TCSP) Program	May - Letter of Intent August - application	Federal Highway Administration	\$270 million nationwide for FY 2005 through FY 2009.	20% non-federal match	Metropolitan Planning Organizations (MPOs), local, state and tribal agencies	Planning, implementation, and research grants to investigate and address the relationships between transportation, community and system preservation.		http://www.fhwa.dot.gov/tcsp/
National Scenic Byways Program	Dates vary	Federal Highway Administration	\$800,000 to \$1 million statewide	20% non-federal match	National Scenic Byways, All-American Roads and State-designated byways.	Improvements to enhancing access to a recreation area include bicycle and pedestrian facilities to the extent that the project and recreational area have a clear, demonstrated role in enhancing the byway traveler experience.		http://www.bywaysonline.org/

	Due Date	Agency	Annual Total	Matching	Eligible Applicants	Eligible Projects	Comments	Website
Energy Efficiency and Conservation Block Grant Program (formula grants)(EECBG)	June	U.S. Department of Energy	\$2.7 billion nationwide	None	States, territories, Indian tribes, cities and counties.	Development of bike lanes and pathways and pedestrian walkways; State/local/regional integrated planning activities with the goal of reducing greenhouse gas emissions and vehicle miles traveled; and incentive programs to reduce commutes by single occupancy vehicles.	Focus on projects that reduce energy use and fossil fuel emissions, and that improve energy efficiency.	www.eecbg.energy.gov
Environmental Education Grants	mid December	U.S. Environmental Protection Agency	\$2 million to \$3 million nationwide	25% non-federal match	Colleges and universities, local and tribal education agencies, state education or environmental agencies, not-for-profit organizations, and non-commercial educational broadcasting entities	Project must address at least one of the following: capacity building, education reform, community stewardship, health, teaching skills, or career development.	Funding supports environmental education projects that enhance the public's awareness, about environmental quality. Ideal for funding interpretive elements of trail.	http://www.epa.gov/enviroed/grants.html
Rivers, Trails and Conservation Assistance (RTCA) Program	August	National Park Service	technical assistance	None	Community groups, non-profits, local, state and federal agencies	River conservation, open space preservation, trail and greenway planning and development	RTCA assists with conceptual and master planning, organizational development, project coordination, facilitation, and public involvement.	http://www.nps.gov/arc/hive/pwro/rtca/

	Due Date	Agency	Annual Total	Matching	Eligible Applicants	Eligible Projects	Comments	Website
STATE-ADMINISTERED FUNDING								
Safe Routes to School Program (SR2S)	Late May	Caltrans	\$48.5 million statewide	10% local match	Cities and Counties	Construction of new crosswalks, curb ramps, sidewalks and bicycle paths; and the installation of new signs, striping and pedestrian countdown signals.	Primarily construction program to enhance safety of pedestrian and bicycle facilities.	http://safety.fhwa.dot.gov/saferoutes/ www.dot.ca.gov/hq/LocalPrograms/saferoutes/saferoutes.htm
Federal Safe Routes to School (SRTS)	Mid July	Caltrans	\$46 million	None	State, cities, counties, Metropolitan Planning Organizations (MPOs), Regional Transportation Authorities (RTPAs) and other organizations that partner with one of the above	Stand alone infrastructure or non-infrastructure projects that must be located within 2 miles of a grade school or middle school.	Construction, education, and enforcement program to encourage children to walk and bike to school by making it safer for them to do so.	http://safety.fhwa.dot.gov/saferoutes/
Recreational Trails Program	October 1	California State Parks	\$4.6 million statewide	12% non-federal source	Private organizations, or municipal, county, state, tribal, or federal agencies.	Acquisition, development and rehabilitation of trails and trailhead facilities, safety programs, maintenance and restoration of existing trails (for non-motorized and motorized recreation trail uses).		www.fhwa.dot.gov/environment/rectrails/ www.parks.ca.gov/default.asp?page_id=24324

	Due Date	Agency	Annual Total	Matching	Eligible Applicants	Eligible Projects	Comments	Website
Bicycle Transportation Account (BTA)	December	Caltrans	\$7.2 million statewide	Federal and state grants may be used for 10 % local match.	Cities, counties that prepare and adopt a Bicycle Transportation Plan (BTP).	New bikeways serving major transportation corridors; secure bicycle parking facilities; elimination of hazardous conditions on existing bikeways; planning; improvement and maintenance of bikeways.	Funds projects that improve safety and convenience for bicycle commuters.	http://www.dot.ca.gov/hq/LocalPrograms/bta/btawebPage.htm
California Conservation Corps	Ongoing	California Conservation Corps	Labor	None	city, county, state and federal agencies, school districts, non-profit organizations and private industry	<ul style="list-style-type: none"> * Park development, maintenance and restoration; disabled access to recreational facilities * Trail construction (hiking, equestrian, interpretive, disabled access) 	Labor for projects that conserve the State's natural resources, enhance recreation opportunities, and provide improved access.	http://www.ccc.ca.gov
Community Based Transportation Planning Grant	April	Caltrans	\$3 million statewide	10% local match	Metropolitan Planning Organizations (MPOs), Regional Transportation Agencies (RTPAs), cities, counties, transit agencies, and federally recognized tribal governments.	Pedestrian/bicycle/transit linkage studies or plans. Studies or plans that promote traffic calming, walking, biking, and livability. Green transportation infrastructure planning. Open space conservation planning.	Transportation and land use planning projects that encourage community involvement and partnership. Projects must support livable/sustainable community concepts.	http://www.dot.ca.gov/hq/tpp/grants.html

	Due Date	Agency	Annual Total	Matching	Eligible Applicants	Eligible Projects	Comments	Website
Environmental Justice Transportation Planning Grant	April	Caltrans	\$3 million statewide	10% local match	Metropolitan Planning Organizations (MPOs), Regional Transportation Agencies (RTPAs), cities, counties, transit agencies, and federally recognized tribal governments.	Those that involve under-representative groups in planning and project development; improve access and safety for pedestrians and bicyclists; provide planning and safety improvements for pedestrians and bicycles for the low-income, minority, and tribal communities. Other eligible projects include feasibility studies for transportation improvements in under-served communities; transportation and land use projects in central and inner cities and older suburbs; and transportation projects in underdeveloped rural and agricultural areas.	Projects should have a clear focus on transportation and community development issues that address the interests of low-income, minority, Native American, and other under-represented communities.	http://www.dot.ca.gov/hq/tpp/grants.html
Land and Water Conservation Fund	November - local agencies September - state agencies	California State Parks	\$3.25 million statewide	50% non-federal match	Cities, counties park districts and special districts	Planning, acquisition, and development of outdoor recreation areas and facilities, including trails.	Property acquired or developed under the program must be retained in perpetuity for public outdoor recreation use.	http://www.parks.ca.gov/default.asp?page_id=24820

	Due Date	Agency	Annual Total	Matching	Eligible Applicants	Eligible Projects	Comments	Website
Proposition 84 California River Parkways and the Urban Streams Restoration Grant Program	Pending	Department of Water Resources/ Natural Resource Agency	\$28.4 million statewide - River Parkways \$9.1 million statewide - Urban Streams Restoration	None	Local public agencies, non-profits, and community groups. State agencies are eligible to apply for the River Parkways program only.	<ul style="list-style-type: none"> * Creation or expansion of trails * Improvements to existing river parkways. * Provision of river access for non-motorized activities. * Relocation or reconstruction of existing trails to correct environmental damage. 	Due to the budget crisis funding has been delayed.	River Parkways http://www.resources.ca.gov/bonds_riverparkways.html Urban Streams Restoration http://www.watershedrestoration.water.ca.gov/urbanstreams/
Proposition 84 Statewide Park Program	Pending but will occur no earlier than 2011.	California State Parks	\$368 million statewide for two funding cycles beginning in 2009.	None	Cities, regional park districts, Joint Power Authorities (JPAs), counties, non-profits organizations	Acquisition and development projects for creation of new parks, non-motorized neighborhood and regional recreational trails, open spaces and natural areas.	Grants awarded to most critically underserved communities for the creation of new parks and facilities.	http://www.parks.ca.gov/default.asp?Page_id=26025
Proposition 84 Nature Education Facilities Program	Pending	California State Parks	\$93 million statewide	None	Cities, counties, state agencies, districts, Joint Power Authorities (JPAs) (JPAs), non-profit organizations	Construction and renovation of nature facilities, buildings and structures for public education purposes or for marine wildlife conservation research.	Acquisition projects are not eligible under this program.	http://www.parks.ca.gov/default.asp?Page_id=26026

	Due Date	Agency	Annual Total	Matching	Eligible Applicants	Eligible Projects	Comments	Website
Proposition 84 Sustainable Communities Planning Grant and Incentives Program	Late May	Strategic Growth Council	\$60 million statewide for three funding cycles beginning in 2010.	None	Cities, counties, Metropolitan Planning Organizations (MPOs), Regional Transportation Planning Agencies (RTPAs), Joint Powers Authorities (JPAs), Council of Governments (COGs)	<p>Projects that support the development and implementation of effective and/or innovative local plans that support the state's AB 32 GHG emission reduction targets and implement SB 375, while creating sustainable communities.</p> <p>Projects that support collaboration between cities and/or counties, JPAs, COGs or RTPAs to work with local governments to develop or implement regional plans that meet the intent of SB 732.</p>	Primary goal is to develop and implement plans that reduce greenhouse gas emissions.	http://www.sgc.ca.gov/funding.html
Proposition 1B State-Local Partnership Program	Mid August	California Transportation Commission	\$1 billion statewide over a five-year period.	1:1 match of local funds	local or regional transportation agencies	Improvements to bicycle or pedestrian safety or mobility with a useful life of at least 15 years.	Program is split into two sub-programs - a formula program to match local sales tax, property tax and/or bridge tolls (95%) and a competitive program to match local uniform developer fees (5%).	http://www.catc.ca.gov/programs/SLPP.htm

	Due Date	Agency	Annual Total	Matching	Eligible Applicants	Eligible Projects	Comments	Website
Habitat Conservation Fund	Beginning of October	California State Parks	\$2 million statewide	50% non-state match	Cities, counties, or districts	Projects that protect fish, wildlife and native plant resources through the acquisition or development of wildlife corridors and trails, or through nature interpretation programs and other programs which bring urban residents into park and wildlife areas.		http://www.parks.ca.gov/?Page_id=21361
Environmental Enhancement Mitigation Program (EEM)	Pending	Resources Agency/ Caltrans	\$10 million statewide	None	Local, state and federal agencies and non-profit organizations	Acquisition and/or development of roadside recreational opportunities, including parks and greenways, roadside rests, scenic overlooks, trails, and snow-parks.	Purpose of program is to mitigate environmental impacts of new or modified public transportation facilities beyond the mitigation level required by the project's environmental documentation.	http://www.resources.ca.gov/eem/
Public Access Program	Application accepted on an ongoing basis.	Wildlife Conservation Board	\$1 million statewide	None	Cities, counties and public districts or corporations	Development of fishing piers or floats, access roads, boating launching ramps, trails, boardwalks, interpretive facilities and lake or stream improvements.	Funding for the provision of recreational public access to wildlife habitat, including interpretive trails, river access and trailheads.	http://www.wcb.ca.gov/Pages/public_access_program.asp

	Due Date	Agency	Annual Total	Matching	Eligible Applicants	Eligible Projects	Comments	Website
Land Acquisition Program	Application accepted on an ongoing basis.	Wildlife Conservation Board		None	federal, state and local public agencies and non-profit organizations	Capital outlay costs, including acquisition, implementation, and construction costs.	The WCB acquires real property or rights in real property on behalf of the Department of Fish and Game and can also grant funds to other governmental entities or non-profit organizations to acquire real property or rights in real property.	http://www.wcb.ca.gov/Pages/land_acquisition_program.asp
Partnership Planning Grant	March	Caltrans	\$1 million statewide	20 % non-federal funds or in-kind contribution	Metropolitan Planning Organizations (MPOs), Regional Transportation Agencies (RTPAs), cities, counties, transit agencies, and federally recognized tribal governments.	<ul style="list-style-type: none"> * Studies that identify regional, inter-county, and/or statewide mobility and access needs * Corridor studies and corridor preservation studies * Projects that evaluate transportation issues involving ground access to recreational sites. 	Grant supports transportation planning studies of multi-regional and statewide significance in partnership with Caltrans.	http://www.dot.ca.gov/hq/tpp/grants.html

	Due Date	Agency	Annual Total	Matching	Eligible Applicants	Eligible Projects	Comments	Website
Coastal Conservancy Grants Program	Ongoing	Coastal Conservancy	\$30 million statewide	None	Public agencies and non-profit organizations	Projects that focus on trails and other public access to and along the coast, natural resource protection and restoration in the coastal zone or affecting coastal areas, restoration of coastal urban waterfronts, protection of coastal agricultural land, and resolution of land use conflicts. Funding can cover pre-project feasibility studies, property acquisition, planning and design, environmental review, construction, and monitoring.	Conservancy's goal is to improve public access, recreation, and educational facilities and programs in and around San Francisco Bay, along the coast, the ridgelines, in urban open spaces, and natural areas.	http://scc.ca.gov/category/grants/
FUNDING ADMINISTERED BY REGIONAL AGENCIES								
Transportation Enhancements (TE)	Varies by region. Check with Regional Transportation Planning Agency (RTPA).	Caltrans	\$60 million statewide	11.47% non-federal match	Local, state and federal agencies, non-profit organizations (with a DOT partner).	Pedestrian and bicycle facilities, pedestrian and bicycle safety and education activities, preservation of abandoned railway corridors Note: Hiking trails are eligible for TE funding as long as there is a transportation element to the project being funded.	Program was integrated into the State Transportation Improvement Program (STIP).	http://www.dot.ca.gov/hq/TransEnhAct/TransEnact.htm

	Due Date	Agency	Annual Total	Matching	Eligible Applicants	Eligible Projects	Comments	Website
Regional Surface Transportation Program (RSTP)	Dates vary by Regional Transportation Planning Agencies (RTPAs) or Metropolitan Planning Organizations (MPOs)	Regional Transportation Planning Agencies (RTPAs) or Metropolitan Planning Organizations (MPOs) - Metropolitan Transportation Commission (MTC)	\$407 million statewide, \$76 million for the Bay Area.	20% non-federal match	Cities, counties, transit operators, Caltrans, federal agencies.	Bicycle transportation and parking facilities, preservation of abandoned railway corridors for bicycle and pedestrian trails, and improvements for highways and bridges.	A portion of the STP apportionment is set aside for Transportation Enhancement (TE) projects.	www.mtc.ca.gov/funding/STPCMAQ/
Congestion Mitigation and Air Quality Improvement (CMAQ) Program	Varies by agency	Regional Transportation Planning Agencies (RTPAs), Caltrans - Metropolitan Transportation Commission (MTC)	\$8.6 billion nationwide from FY 2005 to FY 2009. \$69 million for the Bay Area in 2009	20% non-federal match	Cities, counties, and other local governments, transit operators, Caltrans, federal agencies.	Program categories include private-public partnerships, bicycle and pedestrian facilities and programs, planning and project development activities.	Priority consideration for cost-effective emission reduction and congestion mitigation activities.	http://www.mtc.ca.gov/funding/STPCMAQ/

	Due Date	Agency	Annual Total	Matching	Eligible Applicants	Eligible Projects	Comments	Website
Transportation Development Act (TDA) Article 3	Varies by county.	Regional Transportation Planning Agencies (RTPAs) - Metropolitan Transportation Commission (MTC)	Varies - 2% of total TDA. \$771,664 for Contra Costa County, \$414,844 for Solano County	None	Cities, counties, joint powers authorities	Bicycle and pedestrian facility planning and construction.	TDA provides two funding sources: * The Local Transportation Fund (LFT) and * The State Transit Assistance (STA) fund	http://www.mtc.ca.gov/funding/STA-TDA/
Transportation for Livable Communities (TLC)	April	Metropolitan Transportation Commission	\$40 million statewide	20% local match	Cities, Counties or Transit Operators in Priority Development Areas (PDA).	<ul style="list-style-type: none"> * Transportation Infrastructure * Station Improvements * Streetscape Improvements associated with high density housing/mixed use and transit * Connectivity Projects- connecting high density housing/jobs/mixed use to transit (includes class one bicycle/pedestrian paths) * Density Incentives (includes land assembly, site acquisition, entitlements of development project) 	Program funds projects that promote compact developments that encourage transit and nonmotorized transportation. Bicycle and pedestrian improvements may be eligible.	http://www.mtc.ca.gov/planning/smart_growth/#tlc

	Due Date	Agency	Annual Total	Matching	Eligible Applicants	Eligible Projects	Comments	Website
Regional Bicycle and Pedestrian Grant Program	Varies by county. Counties need to submit priority projects by June for MTC to obligate funds by October.	Metropolitan Transportation Commission	\$19.5 million distributed to 9 Bay Area counties.	11.5% non-federal match	Local governments, transit operators, and other public agencies within the nine Bay Area counties.	Construction of the Regional Bicycle Network, regionally significant pedestrian projects as well as bicycle/pedestrian projects serving schools or transit.	Program funds projects three years at a time for a period of 6 years.	http://www.mtc.ca.gov/planning/bicyclespedestrians/regional.htm
Regional Transportation Improvement Program (RTIP)	Varies by Regional Transportation Planning Agency (RTPA)	Regional Transportation Planning Agencies (RTPAs) - Metropolitan Transportation Commission (MTC)	\$580 million statewide (2010), \$26 million for Bay Area (2010)	None	Eligible sponsor of projects for the State Transportation Improvement Program (STIP)	Local road improvements and rehabilitation, public transit, pedestrian and bicycle facilities and grade separation, intermodal facilities, and safety.	The STIP is a multi-year capital improvement program of transportation projects on and off the State Highway System.	http://www.catc.ca.gov/programs/stip.htm

	Due Date	Agency	Annual Total	Matching	Eligible Applicants	Eligible Projects	Comments	Website
Bicycle and Pedestrian Funding Program	Late October	Sacramento Area Council of Governments	\$350 million over 23-year period.	11.47% non-federal match	Local government agencies and their partners within Sacramento, Sutter, Yolo and Yuba counties.	Bicycle and pedestrian planning, education, information and marketing, including bicycle and pedestrian master plans, design manuals, bicycle/pedestrian coordinator positions, public relations campaigns, mapping projects, brochures and pamphlets.	Projects provide facilities for walking and biking within the cities and towns of the region and to provide connections between them .	http://www.sacog.org/regional/funding/funding_programs_bikeped-overview.cfm
Transportation Fund for Clean Air Program (TFCA)	Mid September	Bay Area Air Quality Management District	\$600,000	None	Public agencies within Bay Area Quality Management Air District's jurisdiction.	Construction of bicycle and pedestrian facilities, including paths and bike lanes, and bicycle/pedestrian overpasses.	TFCA funds are available through the Regional Fund - Bicycle Facilities Program and administered through the Air District and the County Program Manager Fund administered the Bay Area's nine county Congestion Management Agencies (CMAs).	http://www.baaqmd.gov/Divisions/Strategic-Incentives/Transportation-Fund-for-Clean-Air.aspx

	Due Date	Agency	Annual Total	Matching	Eligible Applicants	Eligible Projects	Comments	Website
Clean Air Fund (CAF) Program	Late March	Yolo-Solano Air Quality Management District	\$390,000 for eastern Solano County. Western Solano County is funded through the Bay Area Air Quality Management District.	None	Public or private agencies, groups of individuals in the Yolo Solano Air Basin.	Construction of bicycle and pedestrian facilities, implementation of public education campaign.	Program goal is to reduce emissions from motor vehicles by supporting cleaner vehicle technologies, alternative modes of transportation, and educating the public about air pollution.	http://www.ysaqmd.org/incentive-caf.php
FUNDING ADMINISTERED BY LOCAL AGENCIES								
Safe Routes to Transit Grant Program	Pending	East Bay Bicycle Coalition and the Transportation and Land Use Coalition	\$20 million allocated through 2013	None	Public agencies	Safety enhancements for ped/bike station access to transit stations/stops/pods; removal of ped/bike barriers near transit stations; and system-wide transit enhancements to accommodate bicyclists or pedestrians.	Metropolitan Transportation Commission serves as fiscal agent. Next funding cycles will occur in 2011 and 2013.	http://www.transformca.org/campaign/sr2t
Bay Trail Regional Development Program (RDP) Funds	Pending	Association of Bay Area Governments	\$2.5 million	None	Cities, counties, special districts, state and federal agencies, land trusts, non-profit organizations within the nine county Bay Area region.	Program funds projects that complete Bay Trail gaps, including feasibility studies, design and construction.		http://www.baytrail.org/index.html http://www.abag.ca.gov/bayarea/baytrail/grants.html

	Due Date	Agency	Annual Total	Matching	Eligible Applicants	Eligible Projects	Comments	Website
Measure WW - Local Grant Program	February 1 through March 31	East Bay Regional Park District (EBRPD)	\$125 million	None	Cities, special park and recreation districts, county service areas established to provide parks and recreation services in Contra Costa and Alameda counties.	Acquisition and development of capital projects that provide lands and facilities for recreational activities and services and historic preservation.	The Grantee may spend up to 20% of the Project Grant amount for pre-construction costs, including grant administration, survey, plans, permits, specifications, CEQA compliance and/or acquisition documents.	http://www.ebparks.org/www#aa
Solano Bicycle and Pedestrian Program	Pending	Solano Transportation Authority	Uncertain - pending passage of new transportation act.	11.5% local match	Cities and counties in Solano County.	Class I/II multi-use trails, Class III bike routes, streetscape improvements and possibly infrastructure improvements. Program does not fund purely recreational trails but could fund recreation trails within cities if link is demonstrated.	Next funding round will be for 2013 projects.	http://www.solanolinks.com/programs.html#sbpp

NON-TRADITIONAL FUNDING SOURCES

Community Development Block Grants - Entitlement Communities Grant	July	Department of Housing and Urban Development	\$42.8 million statewide	None	Principal cities of Metropolitan Statistical Areas (MSAs); Metropolitan cities with populations of at least 50,000; qualified urban counties with populations of at least 200,000.	Acquisition of real property; relocation and demolition; construction of public facilities and improvements, including sidewalk improvements, bike lanes, paths and trails.	Activities must relate to energy conservation and renewable energy resources.	www.hud.gov/offices/cpd/communitydevelopment/programs/index.cfm
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	Due Date	Agency	Annual Total	Matching	Eligible Applicants	Eligible Projects	Comments	Website
Tax Increment Financing	N/A	City or county redevelopment agencies	N/A	N/A	Neighborhoods or communities that lie within redevelopment project areas.	Urban trails that lie within redevelopment project areas. Trails must be linked with redevelopment plan.		N/A
Development Impact Fees	N/A	Cities, counties	N/A	N/A	N/A	Exactions assessed against developers that are paid prior to construction of land improvements. They can be a significant source of local revenues for development of recreational facilities which are ordinarily within or adjacent to the construction site.	They are a one-time revenue source and could be applicable to the development of new trails.	N/A
Park and Open Space Dedication and Fees (Quimby Act)	N/A	Cities, counties	N/A	N/A	Local public agencies that provides park and recreation services	Projects that secure park and open space land and improvements in conjunction with major residential developments.	Allows a city or county to require payments and/or dedication of land for parks as a condition of subdivision approval.	N/A
Mello-Roos Community Facilities District Special Tax	N/A	City, county, special district, school district, joint powers authority	N/A	N/A	Cities, counties, special districts, school districts, joint powers authorities	Public improvements within that district, including improvements to bike paths, lanes and pedestrian facilities. Improvements for park, recreation and open-space facilities are also eligible.	Property owners with the district are responsible for paying back the bonds.	N/A

	Due Date	Agency	Annual Total	Matching	Eligible Applicants	Eligible Projects	Comments	Website
Special Purpose Sales Tax	N/A	Counties	N/A	N/A	N/A	An additional countywide sales tax could be levied on top of the existing sales tax base to pay for local transportation projects or park and recreation facilities. Counties could use the revenue stream to pay off debt from a bond issuance or set aside a fixed amount annually for a bicycle/pedestrian funding program.	The passage of a sales tax measure would require a two-thirds majority vote of residents. Bay Area counties, with the exception of Solano and Napa counties, have passed ballot measures to fund transportation (including bicycle) projects.	N/A
Special Purpose Parcel Tax	N/A	Counties	N/A	N/A	N/A	A flat per-parcel tax places a set amount of additional tax on every parcel in the subject area and can be levied countywide.		N/A
County Park Generated Revenue	N/A	County parks	N/A	N/A	Cities, counties	Fees collected for day use, boat launching , camping. Revenue also generated from concessioners within the park.		N/A
Bicycle Registration Fees	N/A	Cities, counties	N/A	N/A	Cities, counties	Bicycle-related programs and projects.	Ideal in cities and counties where high concentrations of bicyclists exist.	N/A

	Due Date	Agency	Annual Total	Matching	Eligible Applicants	Eligible Projects	Comments	Website
Trust Fund or Endowment Fund	N/A		N/A	N/A		Trust funds earmark revenue sources to develop sustainable principle that can generate funds for the acquisition and management of parks and open space.	Needed source of funds can come from general appropriations (one-time or ongoing), lotteries, mitigation funds, special taxes, user fees, and severance payments on natural resources extracted from public lands.	N/A
Volunteer and Public-Private Partnerships	N/A	N/A	N/A	N/A	Public agencies, private industries, schools, community groups	Community-based initiative to implement trail construction, improvement and maintenance projects.		N/A
PHILANTHROPY, COMMUNITY INVESTMENT AND PLANNED GIVING								
Kodak American Greenways Program	March 31 through June 30	Eastman Kodak Company, The Conservation Fund and National Geographic Society		None	Local, regional , or statewide non-profit organizations and public agencies	Grants can be used for all appropriate expenses needed to complete, expand or improve a greenway project including planning, technical assistance, legal and other costs.	Program goal is stimulate the planning and design (or restoration) of greenways, trails or waterways in communities throughout the U.S.	http://www.conservationsfund.org/kodak_awards
Bikes Belong Coalition	Ongoing	Bikes Belong Coalition		None	Public agencies and non-profit organizations whose missions are bicycle and/or trail specific.	Facility projects such as bike paths and trails that connect existing facilities or create new opportunities; leverage federal, state, and private funds.	Organization only able to fund 15 -20% of the applications they receive.	http://www.bikesbelong.org/

	Due Date	Agency	Annual Total	Matching	Eligible Applicants	Eligible Projects	Comments	Website
American Canoe Association (ACA) Club-Fostered Stewardship Program	Ongoing	American Canoe Association in partnership with L.L. Bean	To date, ACA has made 44 grants totaling \$35,860.	None	Local and regional paddling clubs	Those that protect, maintain or restore recreational waterways, provide for or improve public access, or enhance safe navigation. Eligible projects include: cleaning up waterways, maintaining access areas, establishing and maintaining paddle trails, and acquiring threatened access points.	Program encourages paddling clubs to take an active role in protecting and improving the nation's rivers, lakes and coastlines.	www.americancanoe.org
Conservation Alliance Grant Program	May 1 and November 1	The Conservation Alliance	\$900,000	None	Non-profit organizations nominated by Alliance member	Those that protect a specific wild land or waterway for its habitat and recreational values and engage grassroots citizen action in support of the conservation effort.	Grants focus on habitat conservation and recreation. The Conservation Alliance conducts two funding cycles annually.	http://www.conservationalliance.com/grants
California State Parks Foundation Competitive Grants Program	Round 1 July 1st Round 2 October 1st Round 3 January 1st Round 4 May 1st	California State Parks Foundation	\$150 million raised since inception.	None	Non-profit organizations, California state park units and park agencies	Trail restoration, habitat restoration, land acquisition, and restoration of historic structures. Trails Legacy Fund supports projects that protect and expand the equestrian, hiking and biking trails in California's state parks, as well as to provide greater accessibility to visitors.	Foundation's mission is focused on protecting, enhancing and advocating for the California State Parks System.	http://calparks.org/programs/competitive-grant/

	Due Date	Agency	Annual Total	Matching	Eligible Applicants	Eligible Projects	Comments	Website
Responsive Grants Program	August	Sierra Health Foundation	\$1 million	None	Non-profit organizations and public agencies in 26-county funding region (includes parts of Solano, San Joaquin, Sacramento, and Yolo counties).	Projects that improve health and quality of life; make the case for need related to the population to be served; identify how the project will improve health; demonstrate the anticipated positive impact; and leverage resources	Program supports projects that improve health and quality of life.	http://www.sierrahealth.org/doc.aspx?129
ACHIEVE Healthy Communities demonstration site	December	National Recreation and Park Association	\$350,000	None	Park and recreation agencies	Projects that 1.) build or strengthen a local coalition of community stakeholders/partners, and 2.) develop a community action plan to address chronic disease risk factors such as physical inactivity.	The other three national organizations offering funding through the ACHIEVE Initiative are the YMCA of the USA, National Association of City and County Health Officials (NACCHO), and the National Association of Chronic Disease Directors (NACDD)	http://www.nrpa.org/achieve
The California Endowment	Ongoing	California Endowment		None	non-profits, government and public agencies.	Projects may include policy development and advocacy, replication, adaption or development of evidence-based program models, community mobilization, organizing and coalition building, and community leadership development.	Program goal is to guide healthy communities by improving the social and physical environments that shape health behavior and outcomes.	http://www.calendow.org/grant_guide/

	Due Date	Agency	Annual Total	Matching	Eligible Applicants	Eligible Projects	Comments	Website
Wal-Mart Acres for America	Pre-proposal due April 1 and September 1	National Fish and Wildlife Foundation and Wal-Mart	\$2.5 million	1:1 match	Non-profit organizations and government agencies.	Land preservation for outdoor recreation, education, or open space - including farmland and forest land - that yields a significant public benefit.	Focus is on projects that conserve Metropolitan Planning Organizations (MPOs) habitat for fish, wildlife, and plants through acquisition of interest in real property.	http://walmartstores.com/Sustainability/5127.aspx
REI	Ongoing	REI	3% of previous year's operating profits - \$2 million in 2009.	None	Non-profit organizations	Access to outdoor recreation and conservation projects.	Funding to make outdoor activities accessible to everyone and promote stewardship of the outdoors through two grant categories: conservation and outdoor recreation.	http://www.rei.com/aboutrei/grants02.html or http://www.rei.com/aboutrei/stewardship_community.html or http://www.rei.com/aboutrei/gives02.html

PARTNERSHIP RESOURCES

Solano Land Trust Conservation Easements and Mitigation Programs	N/A	Solano Land Trust	N/A	N/A	Landowners, state and federal agencies, cattle and sheep grazers, non-profit organizations	<p>The Solano Land Trust:</p> <ul style="list-style-type: none"> * Holds conservation easements on mitigation land. * Receives conservation land in fee-title. * Designs and implements habitat restoration projects on existing SLT properties. * Receives mitigation fees to fund land preservation and restoration activities. 	Solano Land Trust works with partners to permanently protect and preserve farmland, ranchland and open space in Solano County through the acquisition of land and agricultural conservation easements, education and land management.	http://www.solanolandtrust.org/
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	Due Date	Agency	Annual Total	Matching	Eligible Applicants	Eligible Projects	Comments	Website
Trust for Public Land	N/A	Trust for Public Land	technical assistance	N/A	Landowners, community groups, and federal, state and local agencies	TPL provides technical assistance on land conservation projects, and assists states and communities pass ballot measures for conservation-related funding.	TPL conserves land for parks, community gardens, historic sites, rural lands, and other natural places.	http://www.tpl.org/
Rails-to-Trails Conservancy	N/A	Rails to Trails Conservancy	technical assistance	N/A	Community-based organizations, and federal, state and local agencies	Rails to Trails provides technical assistance in areas of trail outreach, planning, design, research and project implementation for abandoned rail corridors.	RTC's mission is to create a nationwide network of trails from former rail lines and connecting corridors to build healthier places for people.	http://www.railstotrails.org
East Bay Regional Park District	N/A	East Bay Regional Park District (EBRPD)	See Measure WW - Local Grant Program above for EBRPD funding program details.	N/A	Public agencies and non-profit organizations	Mission statement includes, but is not limited to, the following objectives: * Participate in partnerships with public agencies, non-profit organizations, volunteers and the private sector to achieve mutual goals. * Provide a diversified system of Regional Parklands, trails and parkland-related services that will offer outstanding opportunities for creative use of outdoor time.		http://www.ebparks.org/planning/mp

	Due Date	Agency	Annual Total	Matching	Eligible Applicants	Eligible Projects	Comments	Website
Bay Trail	N/A	Association of Bay Area Governments (ABAG)	See Bay Trail Regional Development Program (RDP) Funds above for funding program details.	N/A	Non-profit organizations, public and private agencies	ABAG could help identify funding sources, partner on trail projects that link to Bay Trail, and provide guidance on trail planning and development.		http://www.baytrail.org/index.html
Statewide Trails Program and Planning	N/A	California State Parks	See Proposition 84 programs and Habitat Conservation Funds above for funding program details.	N/A	Trail managers, recreation providers, open space managers and non-government trails and greenways advocates.	The Statewide Trails Section provides education and technical assistance on non-motorized trail planning, design, construction, funding and management throughout California.		http://www.parks.ca.gov/?page_id=1324
Outdoor Recreation, Discover the Delta, and Delta Environmental programs.	N/A	Discover the Delta Foundation		N/A		Assists with obtaining funding, marketing and outreach efforts for the project through foundation's programs.	Foundation's mission is to increase awareness of the agricultural, cultural, historical, environmental, and recreational value of the California Delta.	http://www.discoverthedelta.org/

Appendix F. GIS and Mapping Summary

This appendix explains the usefulness of GIS data and what GIS data is available for the Deltra Trail Blueprint Report.

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2.	GIS for the Delta Trail.....	F-3

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1. Introduction

Geographic Information Systems (GIS) are computer-based mapping and database programs that store, manage and analyze information tied to points, lines and areas on maps. Almost any type of information can be displayed and analyzed, making GIS mapping and analysis ideal for many regional planning efforts. For the Delta Trail, GIS maps and analysis are ideal to understand conditions, opportunities, and constraints, identify where trails exist or are already planned, and to study and plan new alignments.

2. GIS for the Delta Trail

Part of the background work for the Great California Delta Trail was to collect relevant GIS data for Contra Costa and Solano Counties and prepare preliminary maps of existing and previously planned trails, and preliminary concepts for new trails that may be included in the Delta Trail System.

The GIS data is available for use by local agencies and organizations for more detailed trail planning work that may follow the Blueprint. It can be used to identify (for example):

Baseline Conditions

- Primary and secondary Delta zones
- City and County boundaries and spheres of influence
- Demographics
- Land use, zoning, parks, waterways
- Existing transportation network
- Opportunities

Existing and planned bicycle, pedestrian and trail systems

- Supportive land uses (parks, open space, commercial or residential development where trails might be an amenity)
- Public parcels and rights of way
- Utility corridors, levees and rail corridors where there may be physical space for a trail

Constraints

- Conflicting land uses (agricultural, industrial, existing residential)
- Limited or unavailable right-of-way
- Major highway, road, or rail lines
- Flood zones, drainages, waterways (except for water trails)
- Sensitive/protected species and habitats

GIS data is useful for studying trail routes, and can even be used for preliminary design, depending on how on the level of data detail. However, when resolving specific design, more detailed topographic and boundary surveying is typically required. Technical studies and plans are also required to address the

environmental and physical constraints and respond to the needs of trail users, adjacent land owners/users, and the trail owning and managing agencies.

Table F-1 provides a list of GIS data that was collected for the project. Figures 1 and 2 in this Blueprint Report provide maps of the counties. An example of a detailed route map is presented in Figure F-1. Similar detailed maps could be used in subsequent stages of trail study and implementation.

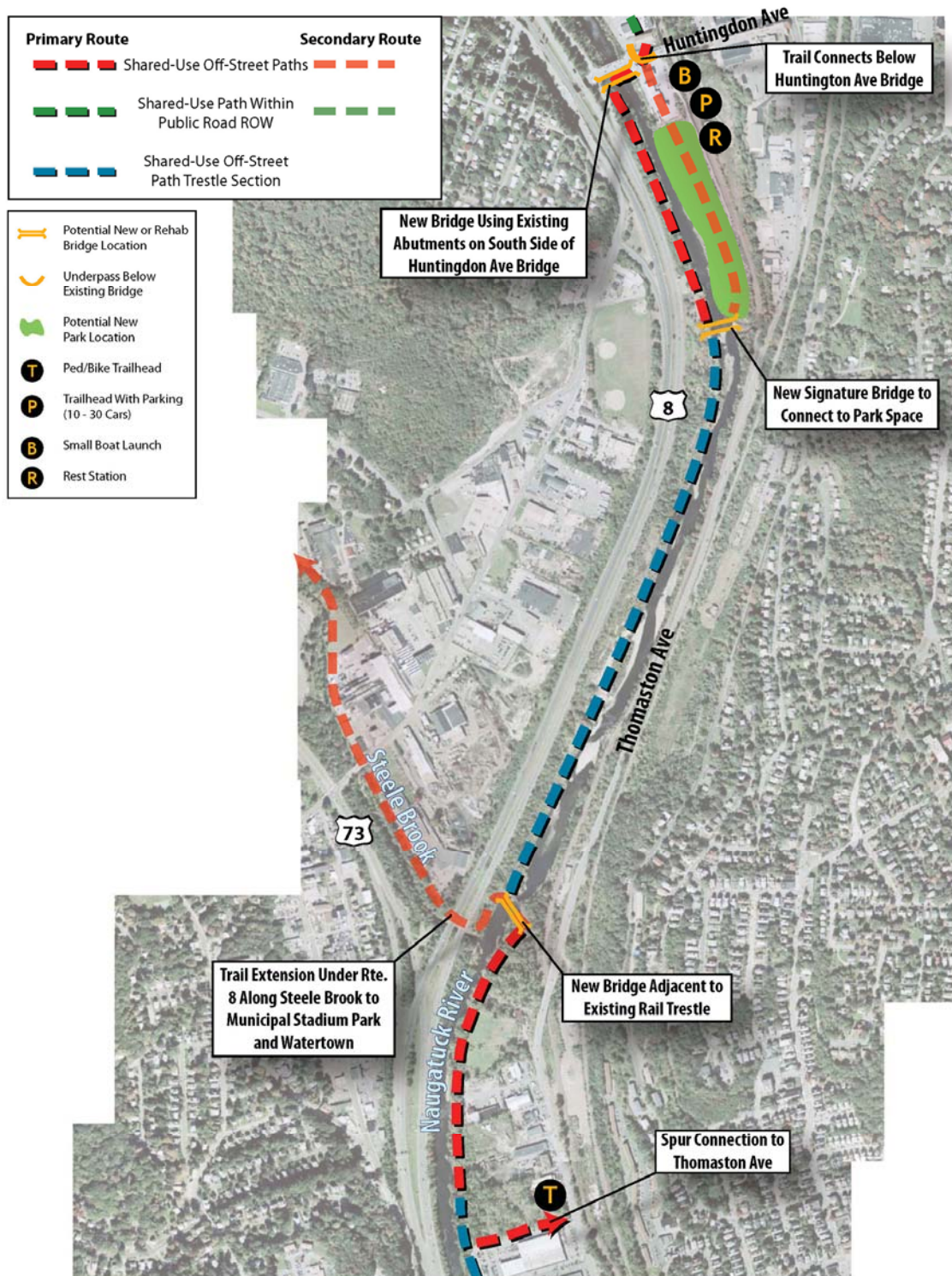
Table F-1: GIS Inventory

Category	GIS Data	Source	Inventory Description
Boundaries			
	Delta Primary and Secondary Zones boundaries	DPC	All Counties
	County and City boundaries	ESRI, CCC	All Counties
	Urbanized Areas	ESRI, CCC	All Counties
Land use & Facilities			
	Zoning		
	Contra Costa Co - Land Use/Zoning	DPC, CCC, DWR	Contra Costa County
	Solano County - Land Use/Zoning	Solano Co, DWR	Solano County
Parks and Open Space			
	Parks	ESRI, CCC	All Counties
	Solano Co - Parks	DPC	Points
Waterways			
	Creeks and Waterways	DPC	All Counties
Recreation			
	Solano Co - Fairgrounds	DPC	Points
	Contra Costa Co - Recreation	CCC	County
Other			
	Census Blocks	DPC	All Counties: Population, age, ethnicity
	City Points	DPC	All Counties
	City Areas	DPC	All Counties
	Schools	ESRI	All Counties
	Contra Costa Co - Fire Stations	CCC	Points
	Contra Costa Co - Parcels	DPC	APN, Address.
	Contra Costa Co - Schools	CCC	Points
	Sacramento Co - Parcels	DPC	APN, Land Use, Address. No Ownership Names
	San Joaquin Co - General Plan	DPC	Land use
	San Joaquin Co - Parcels	DPC	Land use. No Ownership Names or APNs
	Solano Co - Police Stations	DPC	Points
	Solano Co - Schools	DPC	Points
	Solano Co - Hospitals	DPC	Points
	Solano Co - Government Buildings	DPC	Points

Category	GIS Data	Source	Inventory Description
	Solano Co - Senior Centers	DPC	Points
	Solano Co - Ag Layer	Solano Co	County Ag layer
	Solano Co - Parcels	DPC	APN and zoning only
	Yolo Co - Parcels	DPC	APN, Address. No Ownership Names
Transportation & Utilities			
	Trail and bikeway network		
	Bay Area Bikeways	MTC	CCC, Solano
	Contra Costa Co - Existing Bikeways/Multi-Use Paths	DPC	Existing Class 1, 2 & 3 Paved
	Contra Costa Co - Proposed Bikeways/Multi-Use Paths	CCC	Proposed Class 1, 2 & 3 Paved
	Contra Costa Co - Proposed Bikeways/Multi-Use Paths	CCC	Proposed Class 1, 2 & 3 Paved
	Sacramento Co - Existing & Proposed Bikeways/Multi-Use Paths	DPC	Existing and Proposed Class 1, 2 & 3 Paved
	San Joaquin Co - Existing Bikeways/Multi-Use Paths	Alta	Existing Class 1, 2 & 3 Paved
	San Joaquin Co - Proposed Bikeways/Multi-Use Paths	Alta	Proposed Class 1, 2 & 3 Paved
	Solano Co - Existing Bikeways/Multi-Use Paths	Solano Co	Existing Class 1, 2 & 3 Paved
	Solano Co - Proposed Bikeways/Multi-Use Paths	Solano Co	Proposed Class 1, 2 & 3 Paved
	Trails - Bay Area Ridge Trail	DPC	Existing and Proposed
	Trails - East Contra Costa County Trails	DPC	Existing and Proposed Class 1, 2 & 3 Paved
	Trails - EBRPD Master Plan	EBRPD	Existing and Proposed
	Trails - GreenInfo	DPC	Bay Trail, Ridge Trail, Juan Bautista de Anza National Historic Trail*, American Discovery Trail, other trails paved and unpaved, classified and unclassified
	Trails - State Trails	DPC	Mokelumne Coast to Crest, Juan Bautista de Anza National Historic Trail*, American Discovery Trail
	Yolo Co - Existing Bikeways/Multi-Use Paths	Yolo Co	PDF - need to digitize, Existing Class 1, 2 & 3 Paved
	Yolo Co - Proposed Bikeways/Multi-Use Paths	Yolo Co	PDF - need to digitize, Proposed Class 1, 2 & 3 Paved
	Streets and Roads		
	Streets & Highways	ESRI, CCC	All Counties

Category	GIS Data	Source	Inventory Description
	Active and Inactive Rail lines and Rights-of-Way		
	Railroads	ESRI	All Counties
	Utilities		
	Contra Costa County	CCC	County easements
	Solano County		
	Transit		
	Public Transit data (bus stops, train stations)	MTC	CCC & Solano Transit Centers, bus routes, bus stops
Water Management & Levees			
	Waterways Shoreline		
	Creeks and Waterways	DPC	All Counties
	Wetlands	DPC	All Counties
	Levees		
	Levees	DPC	All Counties
	Flood Zone Data 50 and 100 year		
	Floodplain FEMA	DPC	All Counties, 100 year. Need 50 year flood zone
	Climate Change Inundation Zone Data		
	Climate Change Inundation zone data		
Agriculture			
	Ag Zoning		
	Contra Costa Co: Agriculture zoning data	CCC	
	Solano Co - Ag Layer	Solano Co	
	Farmland	CA.gov	All Counties
	Agriculture Types (Active/Inactive, irrigated, non-irrigated)		
	Delta Agriculture Data	DPC	Jpg file covering Delta, with ag data
	City and Farmland Mapping and Monitoring Project Data (productivity, value, etc)		
	Farmland	CA.gov	All Counties, types not values
Habitat Type and Sensitivity			
	Existing Habitat Conservation Areas/Plans		
	Sensitive Habitats	DPC	All Counties
	Waterways and Wetlands Areas		
	Creeks and Waterways	DPC	All Counties

Category	GIS Data	Source	Inventory Description
	Wetlands	DPC	All Counties
	Terrestrial Habitats (CDFG & USFWS)		
	Contra Costa County	DPC	All Counties, vegetation
	Solano County	DPC	All Counties, vegetation
	Aquatic Habitats Data		
	Contra Costa County	marinhabitat.ps mfc.org	
	Solano County	marinhabitat.ps mfc.org	
	Sensitive and Endangered Species Habitats/Listings Data (CNDDDB)		
	Contra Costa County		Can view list on CNDDDB website
	Solano County		Can view list on CNDDDB website
	Cultural Resources Data		
	Contra Costa County		Covered in points of interest data
	Solano County		Covered in points of interest data
	Other		
	Delta Vegetation	DPC	All Counties
Other			
	High Resolution Aerials	CCC	Need for All Counties
	Moderate Resolution Aerials	ESRI	Adequate to 250 scale
	Topographic Lines	USGS	All Counties - Elevation model
	Contra Costa Co - Topographic Lines	CCC	10' and 50'
	Infrared Aerials		
	Parcels		
	Public Access		
	Department of Fish and Game Lands - Habitats Species Watershed	DFG	Bay Delta Region (many/most counties)
Acronym Key			
CCC	Contra Costa County		
DPC	Delta Protection Commission		
DWR	Department of Water Resources		
EBPRD	East Bay Regional Park District		
ESRI	Environmental Systems Research Institute		
MTC	Metropolitan Transportation Commission		
Solano Co	Solano County		
USGS	U.S. Geological Survey		
Yolo Co	Yolo County		



Map 21 - Option E: Thomaston Avenue

Naugatuck River Greenway Routing and Feasibility Study
Waterbury, CT

Source: Aerial photo obtained via Google Earth Pro
Author: Tony Salomone
Date: 11/12/10



0 400 800 Feet



Figure F-1: Example Detailed Route Map - Naugatuck River Greenway